

HST-49

*US Model
AEP Model
UK Model
E Model*



• US model

STEREO CASSETTE-RECEIVER /PROGRAM SENSOR

SPECIFICATIONS

GENERAL

Power Requirements:	120 V ac, 60 Hz (US model) 220 V ac, 50 Hz (AEP model) 240 V ac, 50 Hz (UK model) 110–120/220–240 V ac adjustable, 50/60 Hz (E model)
Power Consumption:	70 W (US model) 105 W (AEP, UK, E model)
Dimensions:	Approx. 482 (w) x 225 (h) x 247 (d) mm Approx. 19 (w) x 8 ⁷ / ₈ (h) x 9 ³ / ₄ (d) inches (US model) Approx. 456 (w) x 225 (h) x 247 (d) mm Approx. 18 (w) x 8 ⁷ / ₈ (h) x 9 ³ / ₄ (d) inches (AEP, UK, E model) including projecting parts and controls
Weight:	Approx. 7.85 kg, 17 lb 5 oz (net) Approx. 8.9 kg, 19 lb 10 oz (in shipping carton) (US model) Approx. 6.85 kg, 15 lb 2 oz (net) Approx. 8.2 kg, 18 lb 1 oz (in shipping carton) (AEP, UK model) Approx. 6.8 kg, 15 lb (net) Approx. 8.15 kg, 18 lb (in shipping carton) (E model)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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FM SECTION

Frequency Range:	87.5 – 108 MHz
Antenna:	300 Ω balanced, 75 Ω unbalanced (US model: equipped with ac line antenna)
Usable Sensitivity:	12 dBf, 2.2 μ V, S/N = 30 dB
Harmonic Distortion:	0.5 % (MONO), 1 % (STEREO) at 400 Hz
Selectivity:	50 dB
S/N Ratio:	65 dB
Frequency Response:	70 Hz – 12.5 kHz $\pm$ 3 dB
FM Stereo Separation:	Better than 35 dB

AM SECTION (US model)

Frequency Range:	530 – 1,605 kHz
Antenna:	Built-in ferrite-rod antenna External antenna terminal
Sensitivity:	50 dB/m, built-in antenna 100 μ V, external antenna

– Continued on page 2 –

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HST-49

S/N Ratio: 50 dB

Harmonic Distortion: 0.8 % at 400 Hz

SW, MW AND LW SECTION (AEP, UK model)

Band	SW	MW	LW
Tuning range	5.8-15.8 MHz (49-19 m)	530-1,605 kHz	150-350 kHz
Antenna	External antenna terminal	Built-in ferrite-rod antenna and external antenna terminal	
Sensitivity	30 μ V, external antenna (S/N = 20 dB)	50 dB/m, built-in antenna 100 μ V, external antenna (S/N = 20 dB)	52 dB/m, built-in antenna 150 μ V, external antenna
S/N ratio	50 dB		
Harmonic distortion	0.8 % at 400 Hz		
Intermediate frequency	468 kHz		

SW AND MW SECTION (E model)

Band	SW1	SW2	MW
Tuning range	2.3-6.2 MHz (120-49 m)	7-17.9 MHz (41-16 m)	530-1,605 kHz
Antenna	External antenna terminal		Built-in ferrite-rod antenna and external antenna terminal
Sensitivity	30 μ V, external antenna (S/N = 20 dB)		50 dB/m, built-in antenna 100 μ V, external antenna
Intermediate frequency	468 kHz		
S/N ratio	50 dB		
Harmonic distortion	0.8 % at 400 Hz		

AMPLIFIER SECTION

Inputs:			
	sensitivity	impedance	S/N
PHONO (phono jacks)	3.5 mV	47 k Ω	65 dB
AUX (phono jacks)	500 mV	47 k Ω	70 dB
MIC (phono jacks)	3.5 mV	600 Ω	60 dB

Outputs:		
	output voltage	impedance
REC OUT (phono jacks)	250 mV	10 k Ω
HEADPHONES	Accepts headphones of 8 Ω or more	
SPEAKER	Accepts speaker of 8 Ω	

Continuous RMS

Power Output:

18 + 18 W (8 Ω) at 90 - 15,000 Hz
(US model: Less than 0.8 % THD, both channels driven simultaneously).
(AEP, UK model: Less than 5 % THD, both channels driven simultaneously).
(E model: EIAJ, THD 5 %)

Music Power: 50 W (8 Ω , DIN45324)
(AEP, UK, E model)

Peak Music Power: 100 W
(E model)

Frequency Response: PHONO: RIAA curve $\pm$ 2 dB
AUX: 30 Hz - 30 kHz $\pm$ 2 dB
MIC: 100 Hz - 10 kHz $\pm$ 2 dB

Tone Controls: BASS: $\pm$ 10 dB at 100 Hz
TREBLE: $\pm$ 10 dB at 10 kHz

Loudness Control: + 7 dB at 100 Hz
(att. 30 dB) + 4 dB at 10 kHz

CASSETTE RECORDER SECTION

Recording System: 4-track 2-channel stereo

Frequency Response: 50 Hz - 12 kHz (with the TAPE SELECT switch set to Fe-Cr)

S/N Ratio: 50 dB

Wow and Flutter: 0.18 % WRMS

MODEL IDENTIFICATIONS

Specification Label

US model

 	STEREO MUSIC SYSTEM	
	MODEL NO. HST-49	
	FREQ. RANGE : FM 87.5-108MHz AM 530-1605kHz	
	IF : FM 10.7 MHz AM 455kHz	
	AC 120V 60Hz 70W	
	SERIAL NO.	MADE IN JAPAN
	CERTIFICATION COMPLYING WITH F.C.C. RULES PART 15	

AEP model

 	STEREO MUSIC SYSTEM	
	MODEL NO. HST-49	
	FREQUENCY RANGE : FM 87.5-108MHz	
	MW 530-1605kHz	
	LW 150-350kHz	
	IF : FM 10.7 MHz	AM 455kHz
	AC : 220V ~ 50Hz	105W
	SERIAL NO.	MADE IN JAPAN

UK model

 	STEREO MUSIC SYSTEM	
	MODEL NO. HST-49	
	FREQUENCY RANGE : FM 87.5-108MHz	
	MW 530-1605kHz	
	LW 150-350kHz	
	IF : FM 10.7 MHz	AM 468kHz
	AC : 240V ~ 50Hz	105W
	SERIAL NO.	MADE IN JAPAN

E model

 	STEREO MUSIC SYSTEM	
	MODEL NO. HST-49	
	FREQUENCY RANGE : FM 87.5-108MHz	
	MW 530-1605kHz	
	SW1 2.3-6.2MHz	
	IF : FM 10.7 MHz	AM 468kHz
	AC : 110-120V/220-240V ~ 50/60Hz	105W
	SERIAL NO.	MADE IN JAPAN

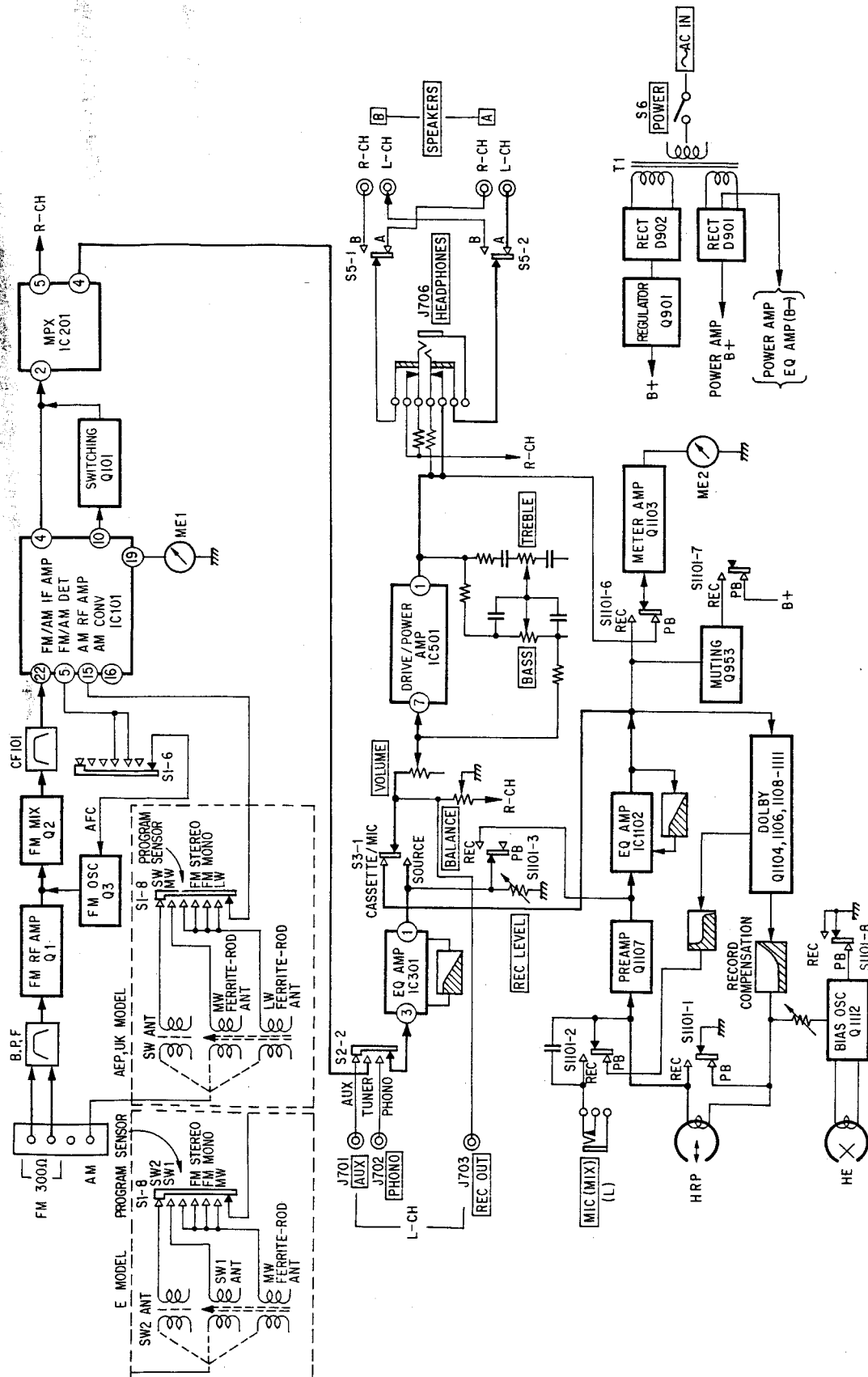
The schematic diagram illustrates the internal circuitry of a radio receiver, organized into several functional blocks:

- Antenna and Tuning Section:** The signal enters via an ANTENNA connected to an FM 300Ω coil. It passes through a BPF (Band Pass Filter) and an FM RF AMP (Q1) to an FM MIX (Q2). An FM OSC (Q3) provides a reference frequency, and an AFC (Automatic Frequency Control) circuit is also shown.
- FM/AM Conversion and Detection:** The FM MIX (Q2) output goes to an FM/AM IF AMP (IC 201), which then feeds into an AM CONV (IC 101). This stage also handles AM RF AMP, FM/AM DET, and AM CONV functions. A PROGRAM SENSOR and AM P (Automatic Monitor) are connected to this section.
- Audio Processing and Amplification:** The signal path continues through a DRIVE, POWER AMP (IC 501) and an EQ AMP (IC 301). It includes a VOLUME control, a CASSETT/MIC input (S3-1), and a BALANCE control. The output is split for HEADPHONES (J706) and SPEAKERS (S5-1, S5-2).
- Power Supply and Biasing:** A POWER section at the top right shows the AC IN, RECT (D902, D901), REGULATOR (Q901), and POWER AMP (B+). A BIAS OSC (Q1112) provides a bias voltage for the EQ AMP (Q1101) and PREAMP (Q1107).
- Control and Monitoring:** A METER AMP (Q1103) is used for signal level monitoring. A REC LEVEL control is present for the REC/PB (Record/Pause) function. A HE (Headset) output is also shown.

The diagram uses standard electronic symbols for components like capacitors, resistors, and transistors, and includes pin numbers for the integrated circuits (ICs) to facilitate assembly.

HST-49

- AEP, UK, E model



• R-CH: SAME AS L-CH

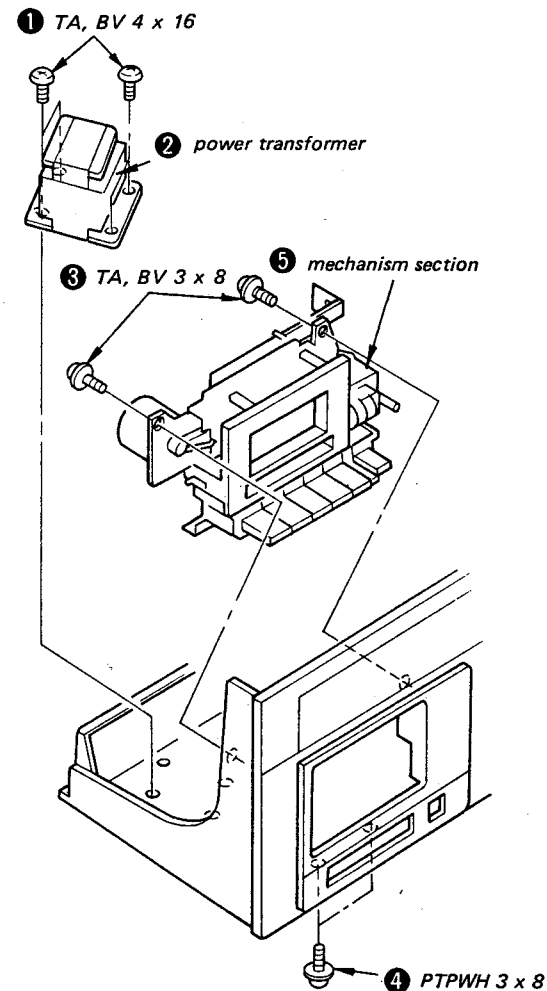
SECTION 2 DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

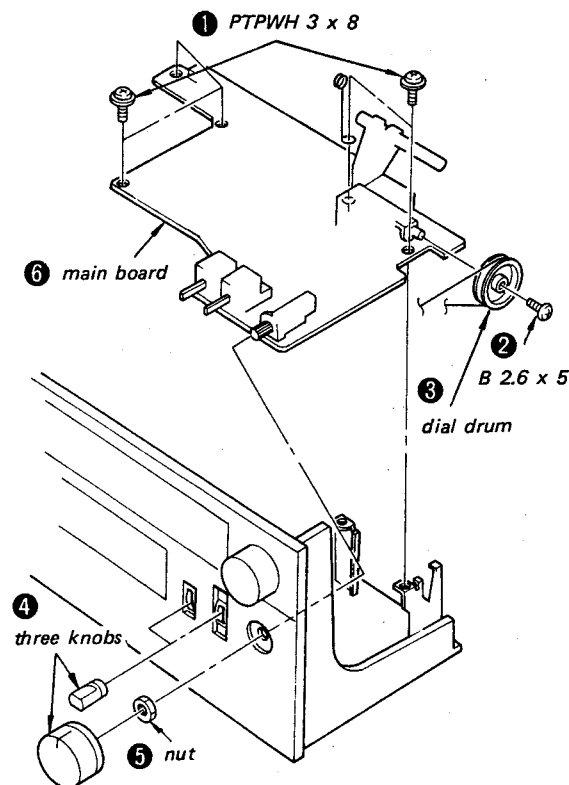
Remove the case.
BTP 4 x 25 (four screws)

Remove the rear board.
PTPWH 3 x 8 (one screw)

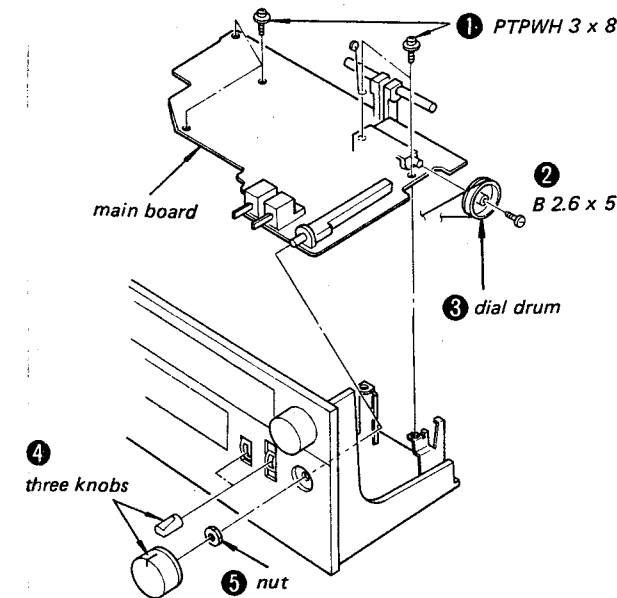
MECHANISM SECTION REMOVAL



MAIN BOARD REMOVAL (US model)



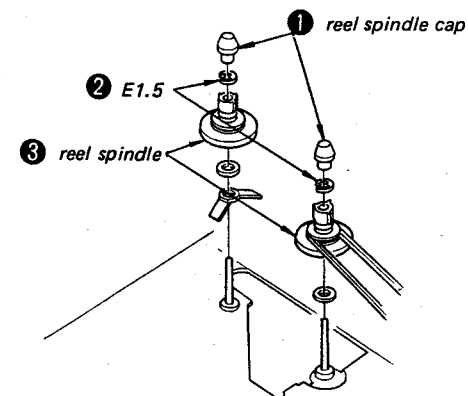
MAIN BOARD REMOVAL (AEP, UK, E model)



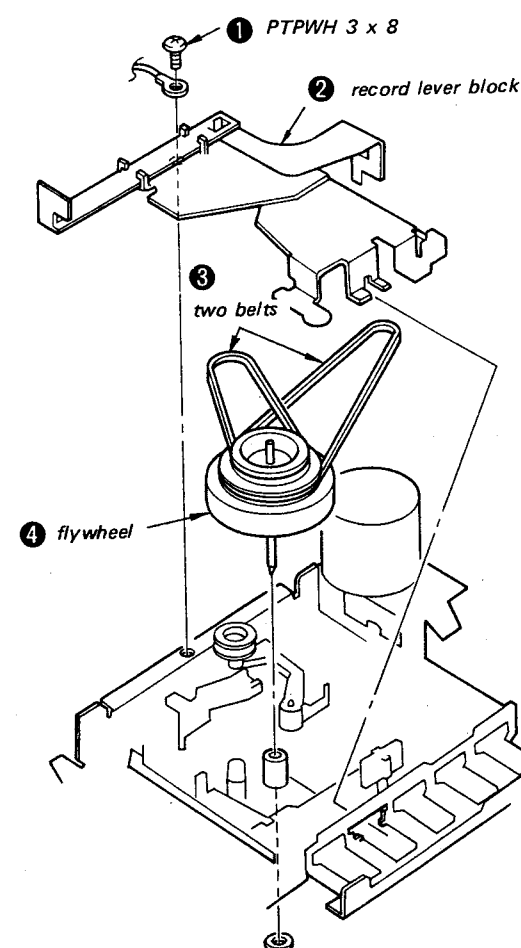
Remove the power amp board.

Remove the cassette deck cover.
TPP 2.6 x 10 (two screws)

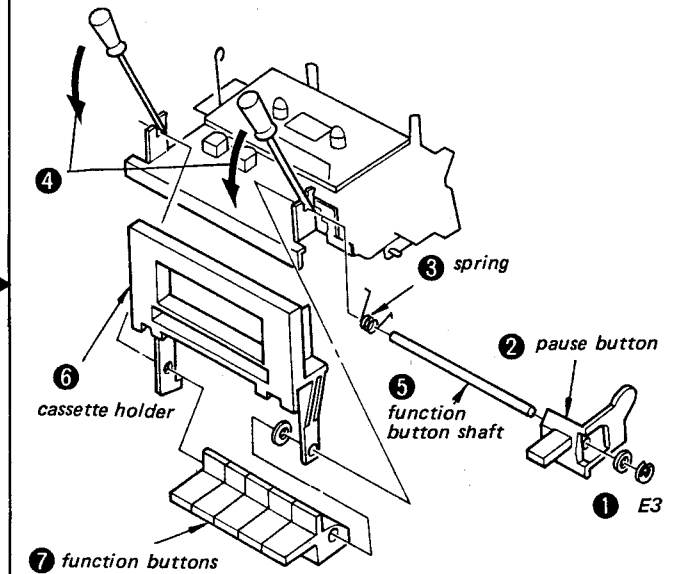
REEL SPINDLE REMOVAL



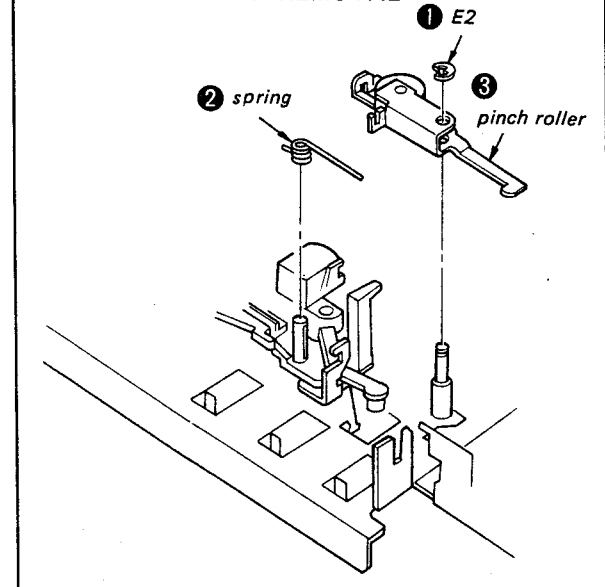
FLYWHEEL REMOVAL



CASSETTE HOLDER REMOVAL

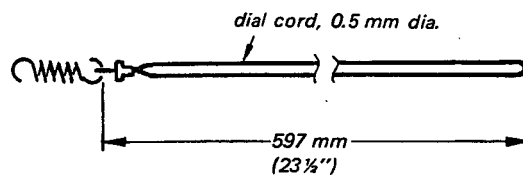


PINCH ROLLER REMOVAL



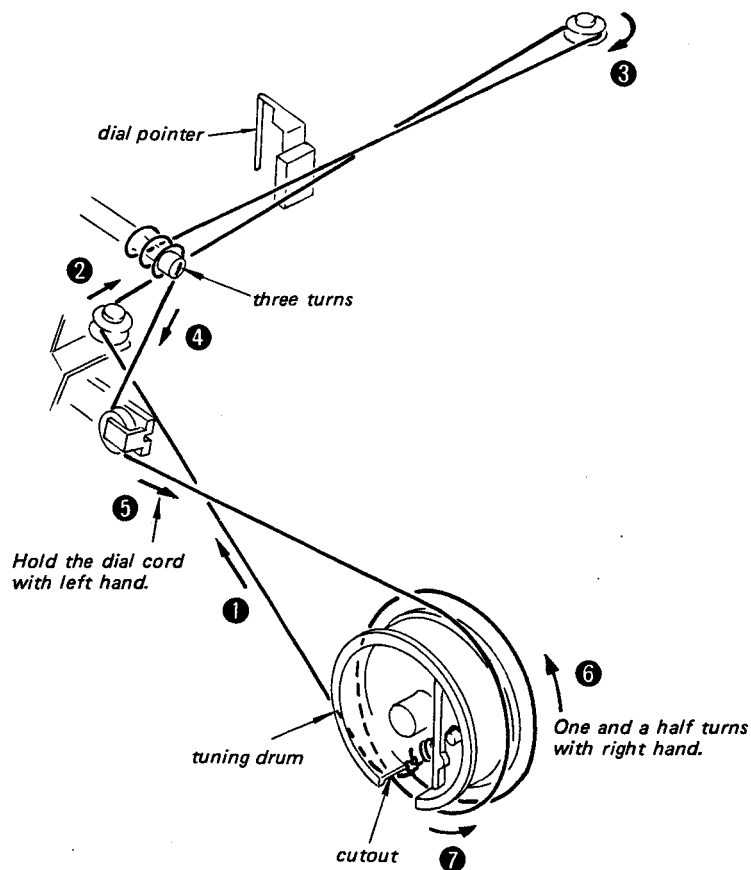
DIAL CORD STRINGING

1. Preparation



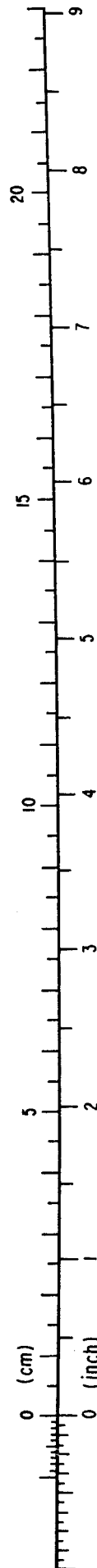
2. Stringing

- Turn the tuning capacitor shaft fully clockwise and set the tuning drum so that the cutout is positioned as shown below.



3. Dial Pointer Setting

Tune in a broadcasting station and set the dial pointer to the frequency of the station on the dial scale.



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

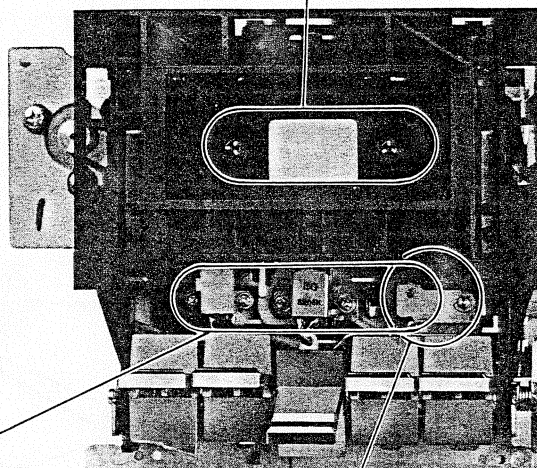
PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply a suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Adjustment

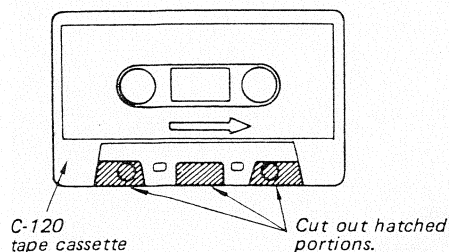
	Torque meter	Meter reading
Forward	CQ-101A, 102A, 103A	25 – 60 g-cm (0.35 – 0.84 oz.-inch)
Fast Forward Rewind	CQ-201A	60 – 110 g-cm (0.84 – 1.53 oz.-inch)



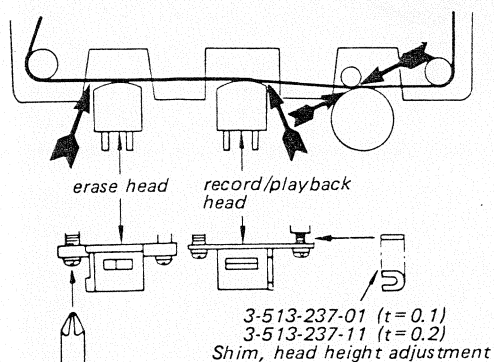
Head Height Adjustment

— Playback Mode —

1. Prepare an adjustment cassette as shown below.



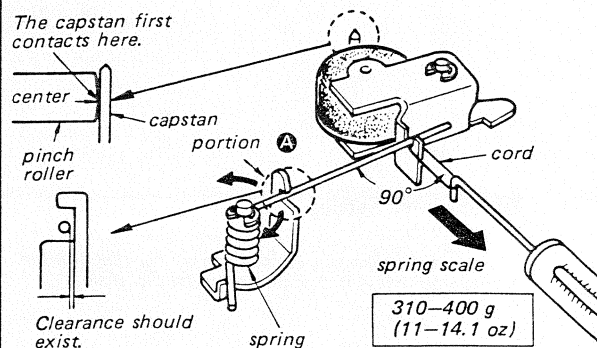
2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at arrowed portions.



Pinch Roller Pressure Adjustment

— Playback Mode —

1. Pull the spring scale.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts to rotate.
3. If necessary, bend the portion **A**.

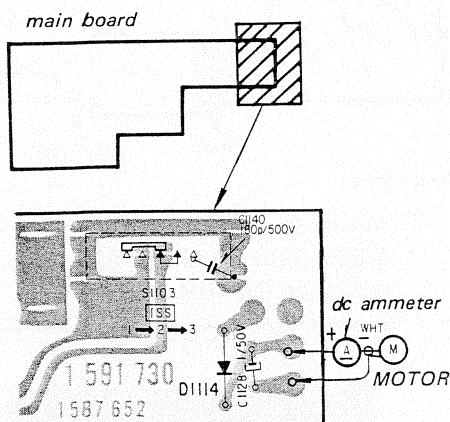


Note: If necessary, replace the spring.

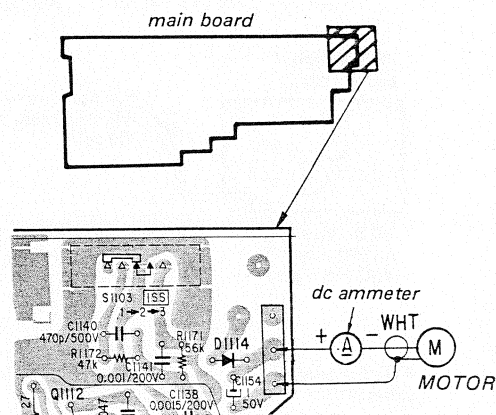
Flywheel Thrust Play Adjustment

— Playback Mode —

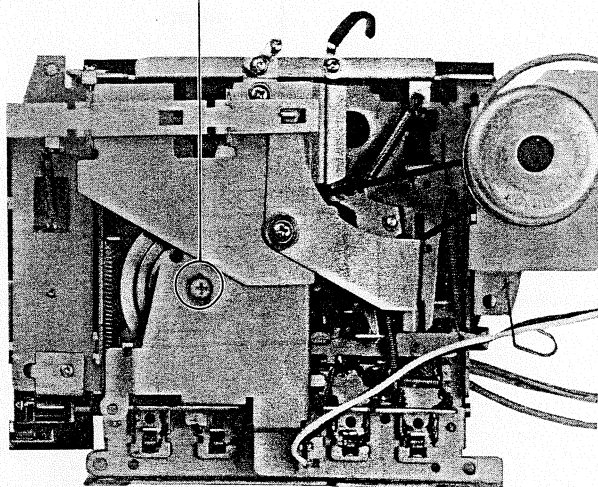
• US model



• AEP, UK, E model



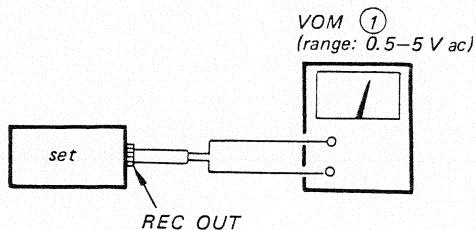
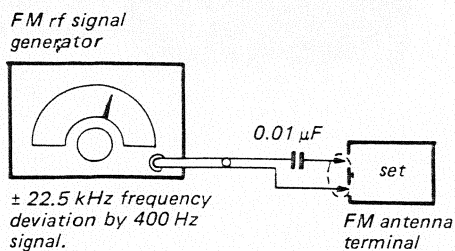
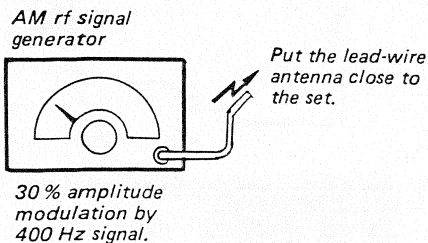
1. Disconnect a lead wire (white) of the motor and connect the dc ammeter as shown above.
2. Turn the thrust screw counterclockwise until the screw tip is detached from the flywheel shaft.
3. Gradually turn the thrust screw clockwise to the position where the motor current suddenly increases.
4. Then, turn the thrust screw counterclockwise about $\frac{1}{4}$ turn from the position obtained in step 2.



3-2. ELECTRICAL ADJUSTMENTS

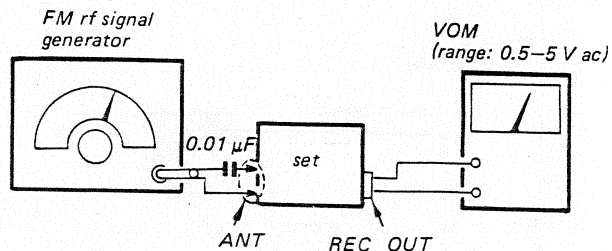
AM, FM SECTION

Setting: FUNCTION (2) switch: TUNER
FUNCTION (1) switch: AM or FM



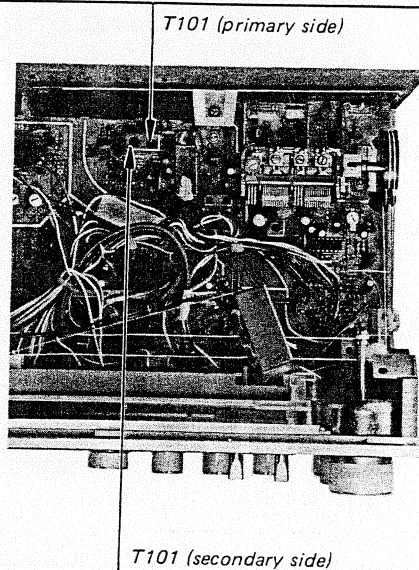
FM IF Alignment (Discriminator Alignment)

Setting:



Procedure:

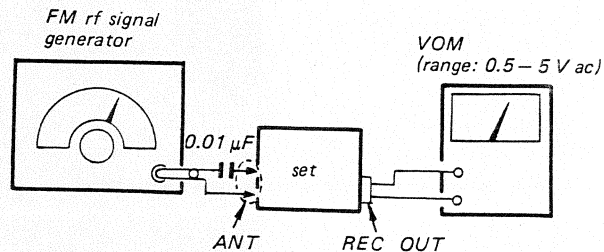
1. Detune the set.
2. Adjust T101 (primary side) for a maximum reading on the VOM.



FM Distortion Adjustment

- Perform this adjustment after the FM IF Alignment.

Setting:



Procedure:

Adjust T101 (secondary side) for a minimum reading on VOM.

AM, FM SECTION

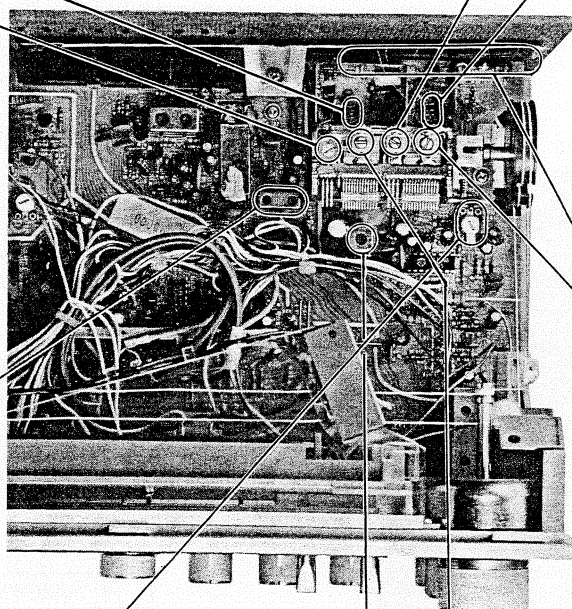
Setting: FUNCTION (2) switch: TUNER
 FUNCTION (1) switch: AM or FM

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ① .	
CT2	108.5 MHz
L3	87.1 MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ① .	
CT1	108.5 MHz
L1	87.1 MHz

AM IF ALIGNMENT	
Adjust for a maximum reading on VOM ① .	
455 kHz	CFU101

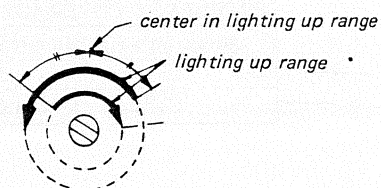
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ① .	
AM ANT	600 Hz
CT3	1,400 kHz



RV206

19 kHz ADJUSTMENT

1. Tune the set to FM stereo signals.
2. Turn RV206 clockwise or counterclockwise and secure RV206 at the center in lighting-up range of stereo lamp as shown below.



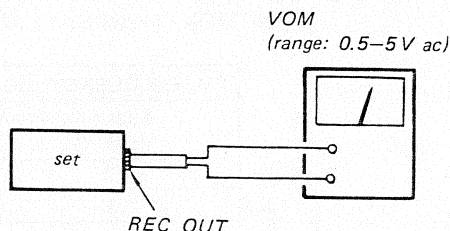
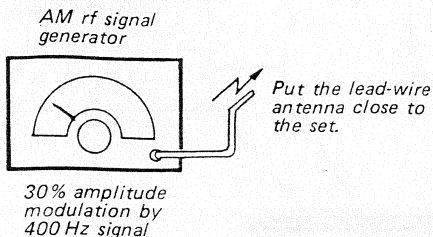
AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM ① .	
CT4	1,680 kHz
L52	520 kHz

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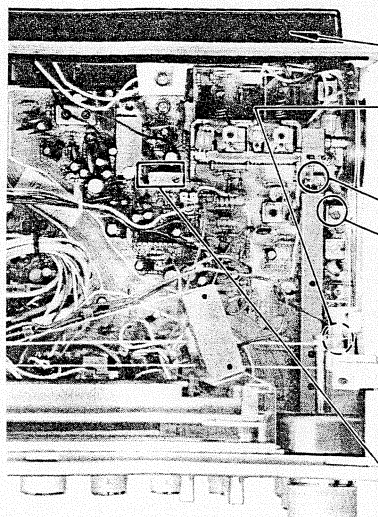
AEP, UK, E model

MW SECTION

Setting: FUNCTION (2) switch: TUNER
FUNCTION (1) switch: MW



• AEP, UK model

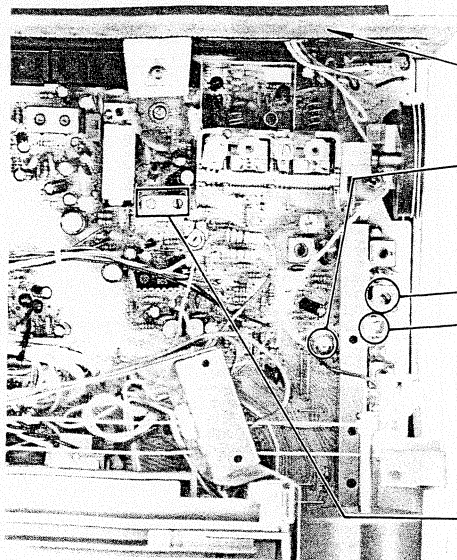


TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM	
L55	620 kHz
CT55	1,400 kHz

FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM	
CT52	1,680 kHz
L52	520 kHz

IF ALIGNMENT	
Adjust for a maximum reading on VOM	
CFU101	468 kHz

• E model



TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L54	620 kHz
CT54	1,400 kHz

FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L51	520 kHz
CT51	1,680 kHz

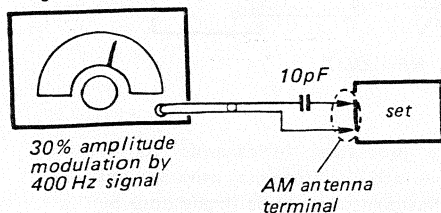
IF ALIGNMENT	
Adjust for a maximum reading on VOM.	
CFU101	468 kHz

SW, LW SECTION

• SW FREQUENCY COVERAGE

SW TRACKING

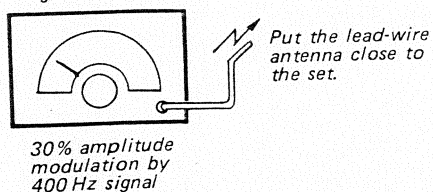
LW TRACKING ②

AM rf signal
generator

• LW FREQUENCY COVERAGE

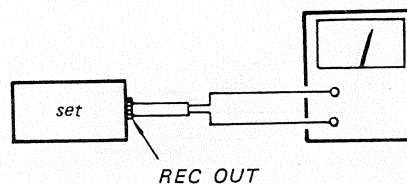
LW TRACKING ①

IF ALIGNMENT

AM rf signal
generator

Setting: FUNCTION (2) switch: TUNER
FUNCTION (1) switch: SW or LW

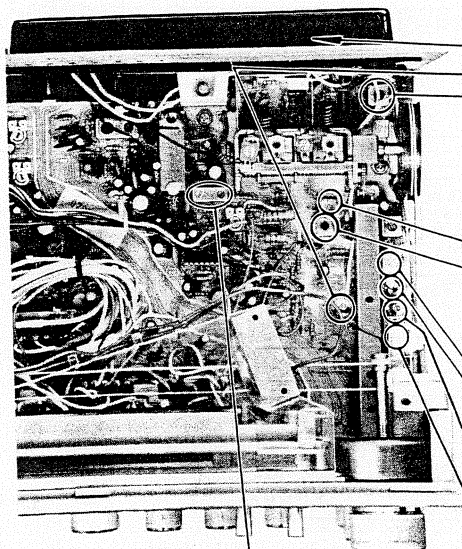
VOM
(range: 0.5–5 V ac)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

- Perform the LW TRACKING ADJUSTMENT in the numerical order given.

LW TRACKING ADJUSTMENT (AEP model)			
① Adjust for a maximum reading on VOM.		② LW ANTENNA SELECTOR switch (S7): ON. Adjust for a maximum reading on VOM.	
L54	170 Hz		
CT54	310 Hz		
		L57	240 kHz



SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM.	
CT53	16.1 MHz
L53	5.5 MHz

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L51	145 kHz
CT51	365 kHz

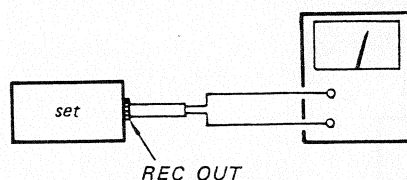
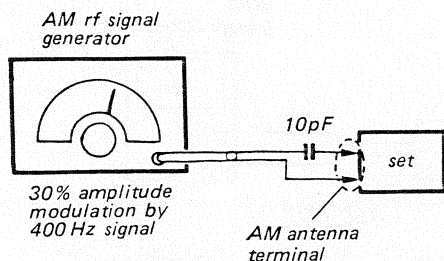
SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
CT56	16.1 MHz
L56	5.5 MHz

468 kHz	CFU101
Adjust for a maximum reading on VOM.	
IF ALIGNMENT	

SW1, 2 SECTION

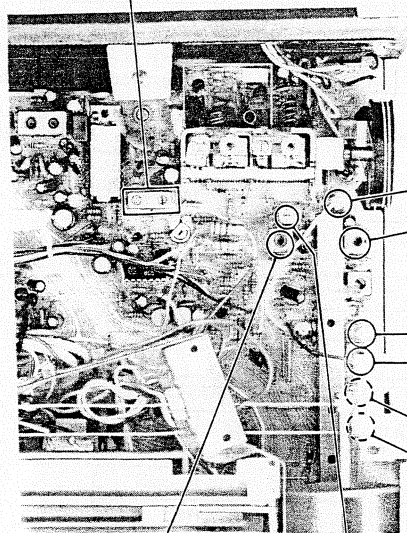
Setting: FUNCTION (2) switch: TUNER
 FUNCTION (1) switch: SW1 or SW2

VOM
 (range: 0.5–5 V ac)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

IF ALIGNMENT	
Adjust for a maximum reading on VOM	
CFU101	468 kHz



SW1 FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VOM.

CT52	6.5 MHz
L52	2.1 MHz

SW2 TRACKING ADJUSTMENT

Adjust for a maximum reading on VOM.

CT56	18.4 MHz
L56	6.8 MHz

SW1 TRACKING ADJUSTMENT

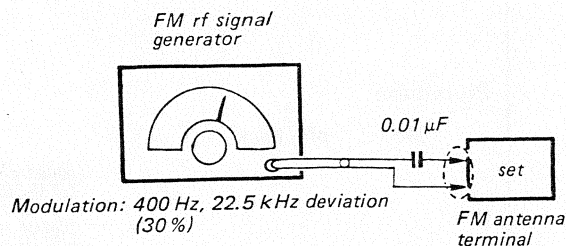
Adjust for a maximum reading on VOM.

CT55	6.5 MHz
L55	2.1 MHz

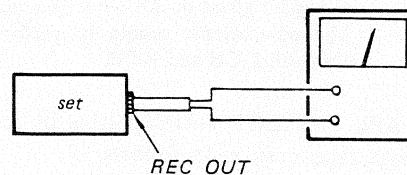
L53	CT53
6.8 MHz	18.4 MHz
Adjust for a maximum reading on VOM.	
SW2 FREQUENCY COVERAGE ADJUSTMENT	

FM SECTION

Setting: FUNCTION (2) switch: TUNER
 FUNCTION (1) switch: FM MONO



VOM
 (range: 0.5–5 V ac)



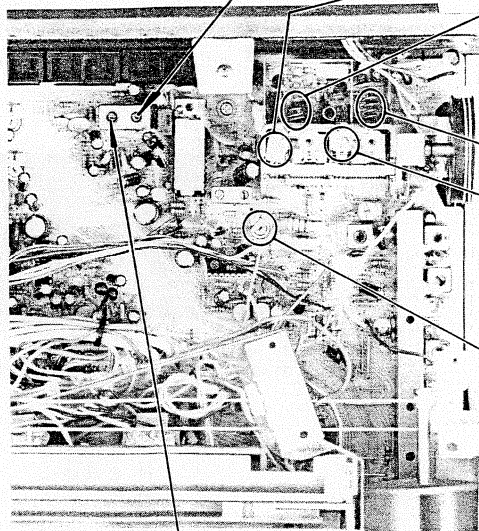
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

IF Alignment (Discriminator Alignment)

Procedure:

1. Detune the set.
2. Adjust T101 (primary side) for a maximum reading on the VOM.

T101 (primary side)



FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VOM.

CT2	108.5 MHz (108.0 MHz)
L3	87.1 MHz (87.5 MHz)

(): in West Germany

TRACKING ADJUSTMENT

Adjust for a maximum reading on VOM.

L1	87.1 MHz (87.5 MHz)
CT1	108.5 MHz (108.0 MHz)

(): in West Germany

RV206

T101 (secondary side)

Distortion Adjustment

- Perform this adjustment after the FM IF Alignment.

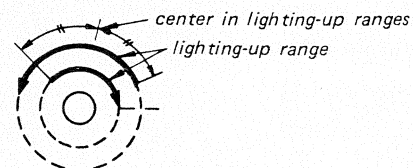
Procedure:

Adjust T101 (secondary side) for a minimum reading on VOM.

19 kHz Adjustment

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV206 clockwise or counterclockwise and memorize the lighting-up range of stereo lamp.
3. Secure RV206 at the center in lighting-up range of both turns as shown below.



TAPE RECORDER SECTION

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

TAPE SELECT switch setting in accordance with tape used is as follows.

Tape	TAPE SELECT
CS-10 (HF)	NORMAL
CS-20 (CrO ₂)	CrO ₂
CS-30 (Fe-Cr)	Fe-Cr

Switches and controls should be set as follows unless otherwise specified.

TAPE SELECT switch NORMAL
MONITOR switch CASSETTE/MIC
FUNCTION (2) switch AUX

Standard Record:

Supply the standard input signal to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	MIC	AUX
source impedance	600 Ω	47 k Ω
input level	3.1 mV (-48 dB)	0.44 V (-5 dB)

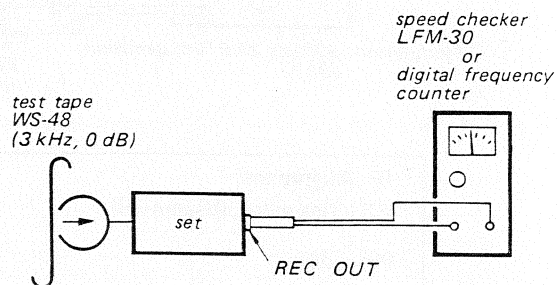
Standard Output Level

	REC OUT
load impedance	10 k Ω
output level	0.25 V (-10 dB)

Tape Speed Adjustment

Procedure:

Mode: playback

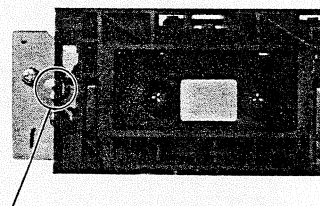


Specification:

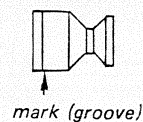
Speed checker	Digital frequency counter
-2 - +2.5 %	2,940 - 3,075 Hz

Frequency difference between beginning and end of tape should be within 1% (30 Hz).

Adjustment Location:



If necessary, replace the motor pulley.



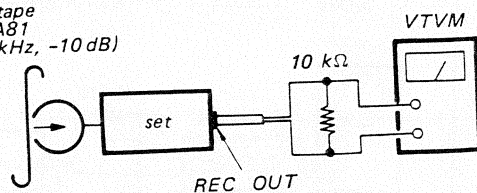
Motor pulley Part No.	Marking	Tape speed change
3-549-088-01	one groove	up ↑ ↓ down
3-549-088-11	no mark	
3-549-088-21	two grooves	

Record/playback Head Azimuth Adjustment

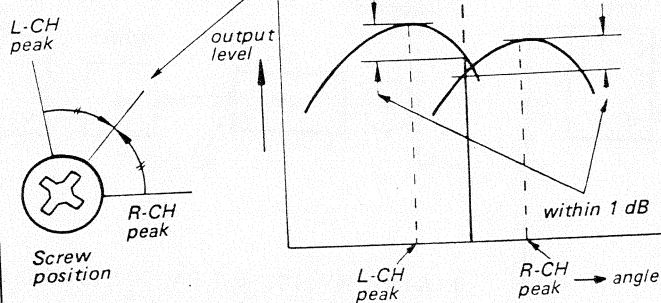
Procedure:

1. Mode: playback

test tape
P-4-A81
(6.3 kHz, -10 dB)

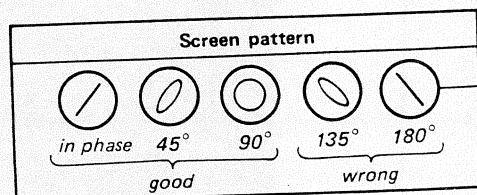
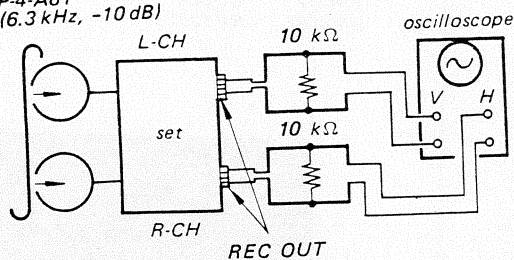


2. Turn the adjustment screw for the maximum level and set it to the mechanical mid position between L-CH and R-CH peak positions.



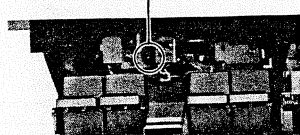
3. Mode: playback

test tape
P-4-A81
(6.3 kHz, -10 dB)



Adjustment Location:

adjustment screw



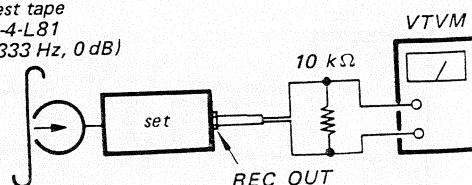
Playback Level Adjustment (AEP, UK, E model)

Setting:

DOLBY switch: OFF

Procedure:

test tape
P-4-L81
(333 Hz, 0 dB)

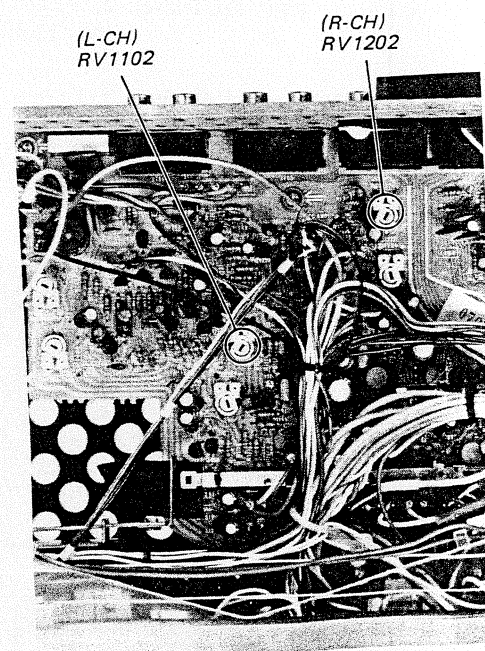


Specification:

LINE OUT level: 235 – 260 mV
(-10.5 – -9.5 dB)

Adjustment Location:

– main board –



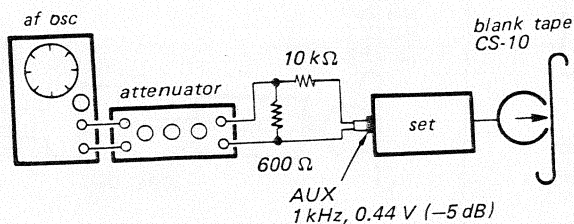
Record Level Adjustment (AEP, UK, E model)

Setting:

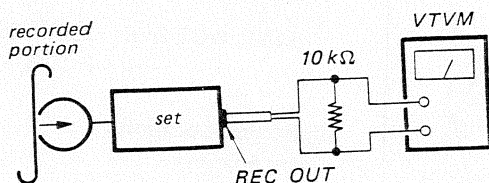
DOLBY switch: OFF

Procedure:

1. Mode: standard record (see page 16)



2. Mode: playback

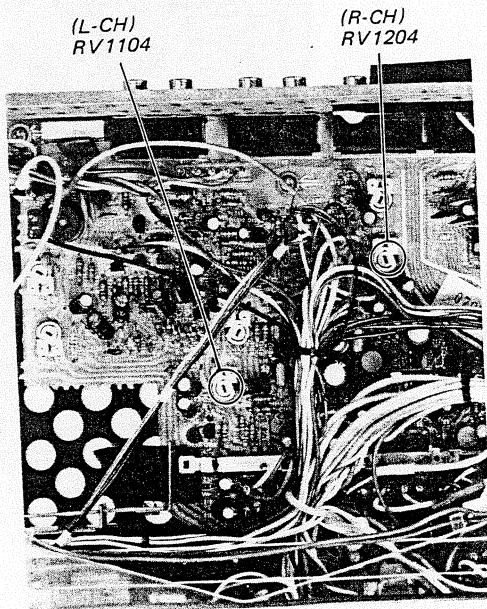


Specification:

REC OUT level: 2.2 – 2.7 V
(9 – 11 dB)

Adjustment Location:

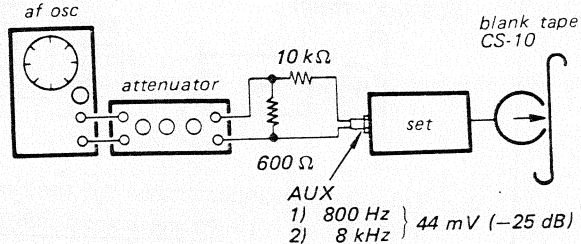
— main board —



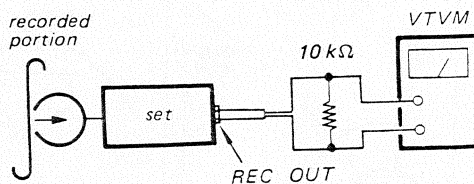
Record Bias Adjustment (US model)

Procedure:

1. Mode: standard record (see page 16)



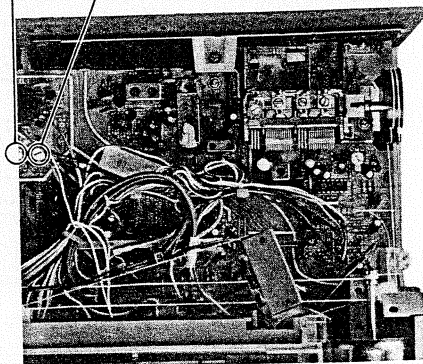
2. Mode: playback



3. Adjust RV1102 and RV1202 to make 800 Hz and 8 kHz signal output levels equal.

Adjustment Location:

(L-CH) RV1102
(R-CH) RV1202



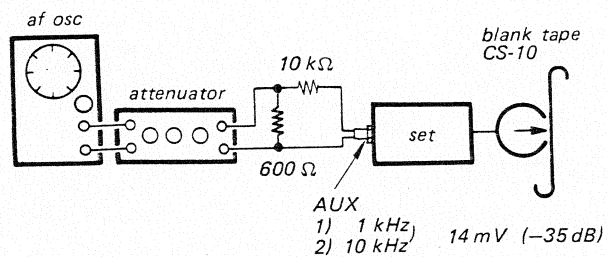
Record Bias Adjustment (AEP, UK, E model)

Setting:

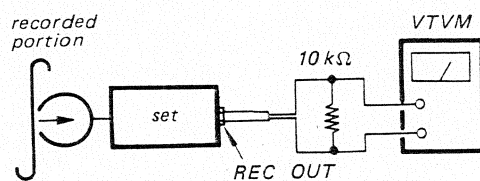
DOLBY switch: OFF

Procedure:

1. Mode: standard record (see page 16)



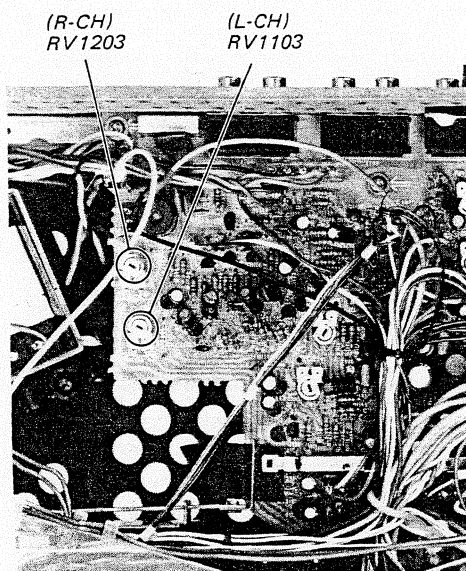
2. Mode: playback



3. Adjust RV1103 and RV1203 to make 1 kHz and 10 kHz signal output levels equal.

Level difference between 1 kHz and 10 kHz signals: 0.69 – 0.85 V
(-1 – +1 dB)

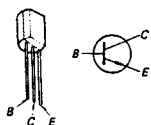
Adjustment Location:



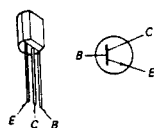
• Replacement Semiconductors

For replacement, use semiconductors except in ().

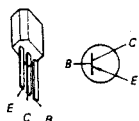
Q1-4: 2SC710



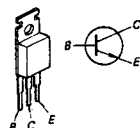
Q101, 151: 2SC1364



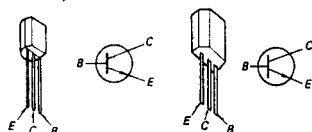
Q150: 2SA678



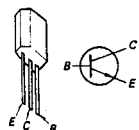
Q901: 2SC1173



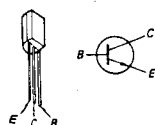
Q953 (AEP, UK, E model)
Q955 (US model)
Q954, 1103, 1203
Q1104, 1204 (AEP, UK, E model) } : 2SC1364 (2SC634A)
Q1109, 1209 (AEP, UK, E model)
Q1111, 1211 (AEP, UK, E model)
Q1106, 1206 (AEP, UK, E model)
Q1107, 1207 } : 2SC1362 (2SC631A)



Q1108, 1208
(AEP, UK, E model): 2SC634A



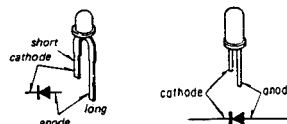
Q1112: 2SD438



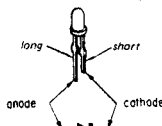
D101-103, 152
D104 (AEP, UK, E model) } : 1S1555
D201, 1114
D1103, 1203: 1T22AM (1T22A)
D1105, 1205
(AEP, UK, E model) } : 1S1555 (1T40)
D1107, 1207
(AEP, UK, E model)
D1106, 1206 : 1T22AM (1T22)
(AEP, UK, E model)



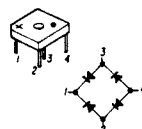
D150, 151: TLR124 (SR105D)



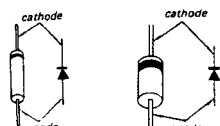
D202, 1108: SLP131B



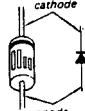
D901: S2VB20



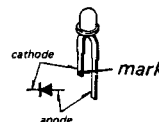
D902: 10E2 (GP08)



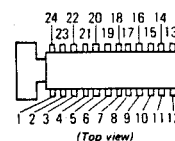
D904: EQB01-28 (EQA01-28)



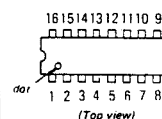
D1109
(AEP, UK, E model): SY405D1 (SY405D)



IC101: CX168



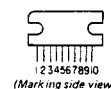
IC201: LA3350



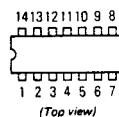
IC301
IC1101: μ PC4558C (μ PC4558)
(US model)



IC501, 601: HA1350S (HA1350)



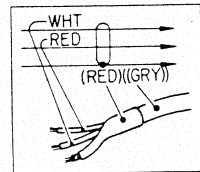
IC1102 (AEP, UK, E model): LA3122



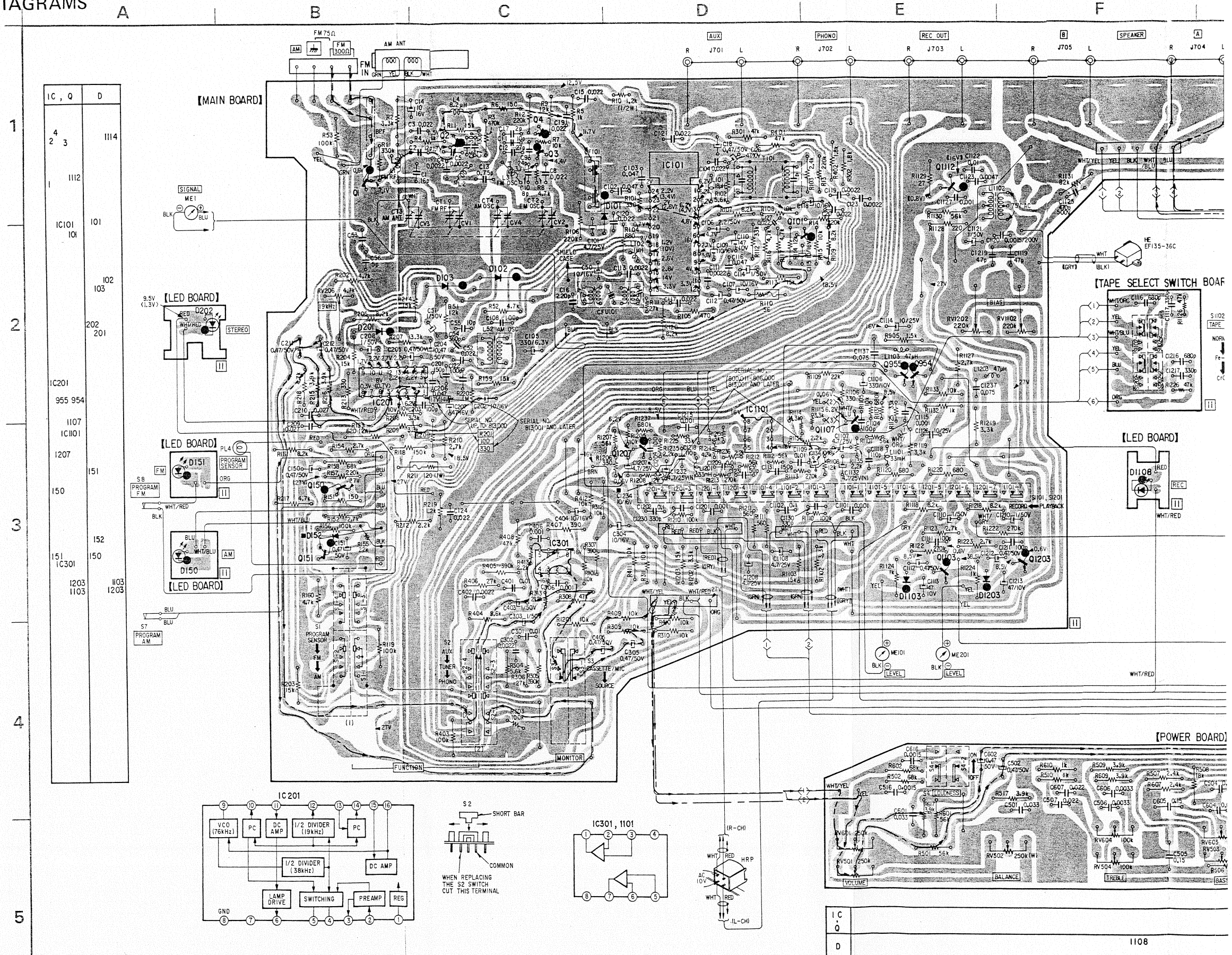
SECTION 4
DIAGRAMS4-1. MOUNTING DIAGRAM
— Conductor Side —

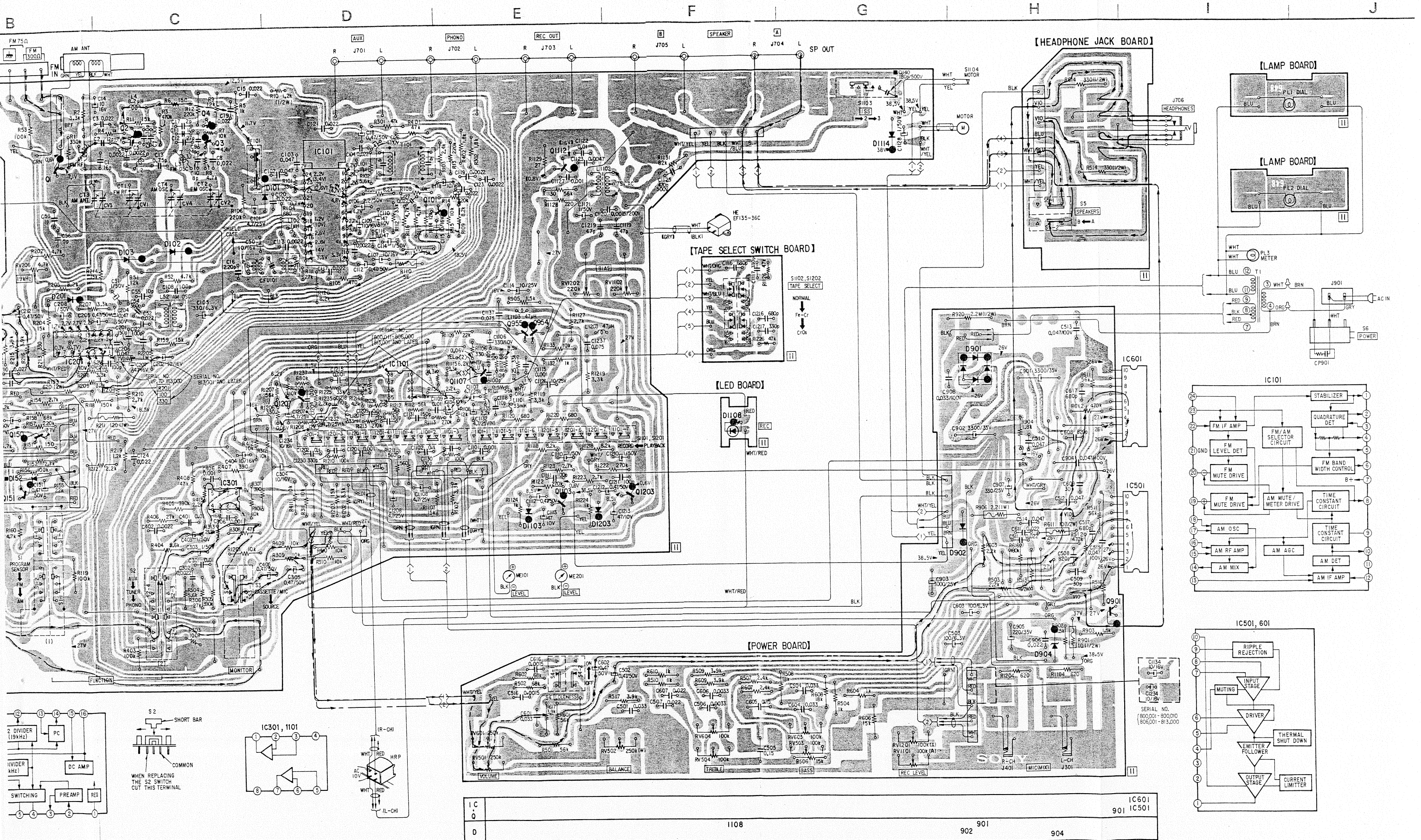
Note:

- : part mounted on the conductor side.
- [] : indicates side identified with part number.
- Color code of sleeving over the end of the jacket.

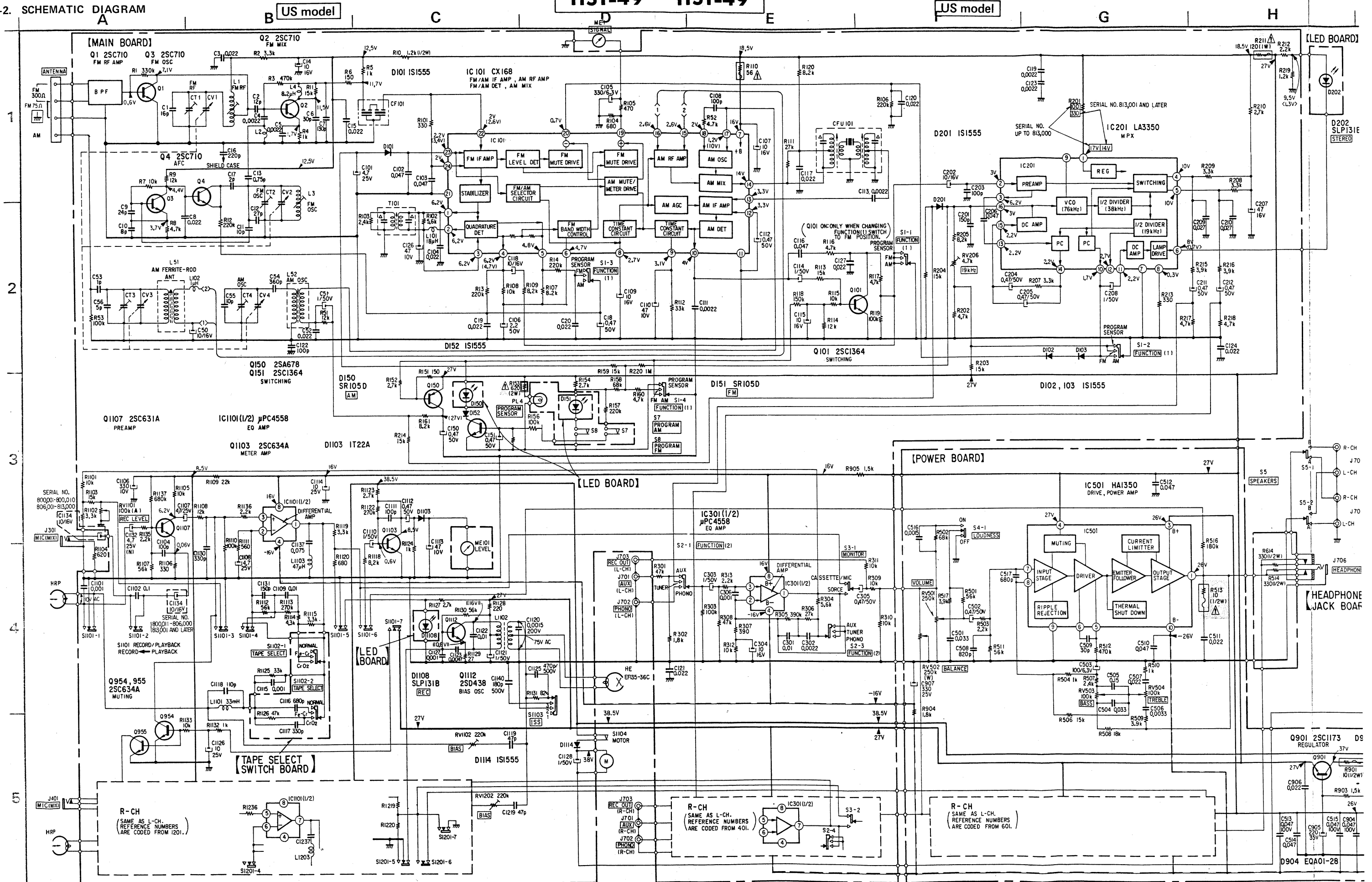


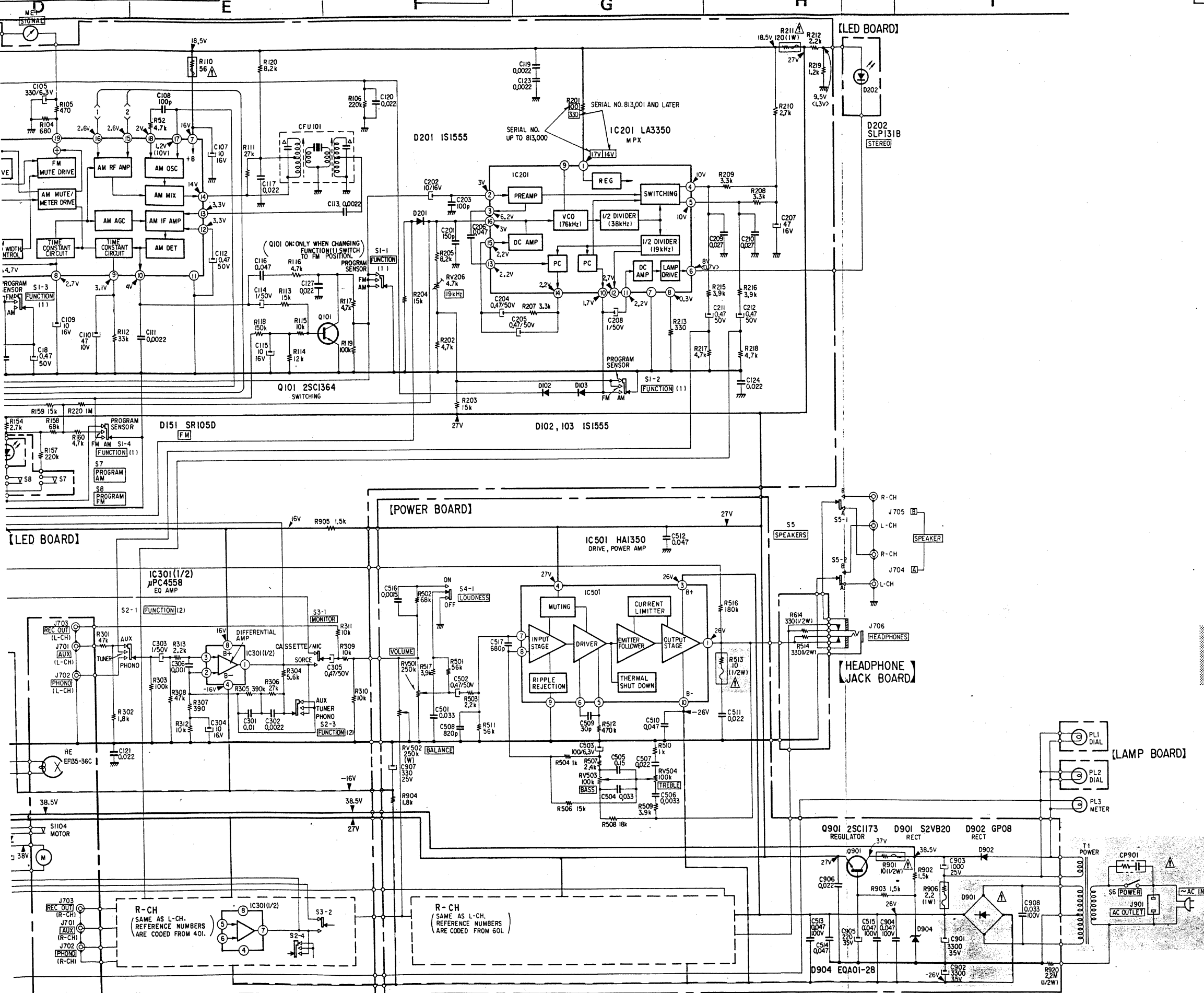
- : B + pattern
- : B - pattern
- Signal Path
- — — — — : L-CH
- — — — — : R-CH





4-2. SCHEMATIC DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted. $pF = \mu\mu F$ 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4} W$ unless otherwise noted. $k\Omega = 1000 \Omega$; $M\Omega = 1000 k\Omega$
- : fusible resistor.
- (N) : low-noise resistor.
- : panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20k Ω/V).
- (V) : AM
< V > : LED light
((V)) : record (with VTVM)
- : B+ bus.
- : B- bus.
- : adjustment for repair
- Switch

Ref. No.	Switch	Position
S1	FUNCTION (1)	PROGRAM SENSOR
S2	FUNCTION (2)	AUX CASSETTE/MIC
S3	MONITOR	OFF
S4	LOUDNESS	OFF
S5	SPEAKER	A
S6	POWER	OFF
S7	AM	OFF
S8	FM	OFF
S1101, 1201	RECORD/PLAYBACK	PLAYBACK
S1102, 1202	TAPE SELECT	NORMAL
S1103	ISS	1
S1104	MOTOR	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

4-2. SCHEMATIC DIAGRAM

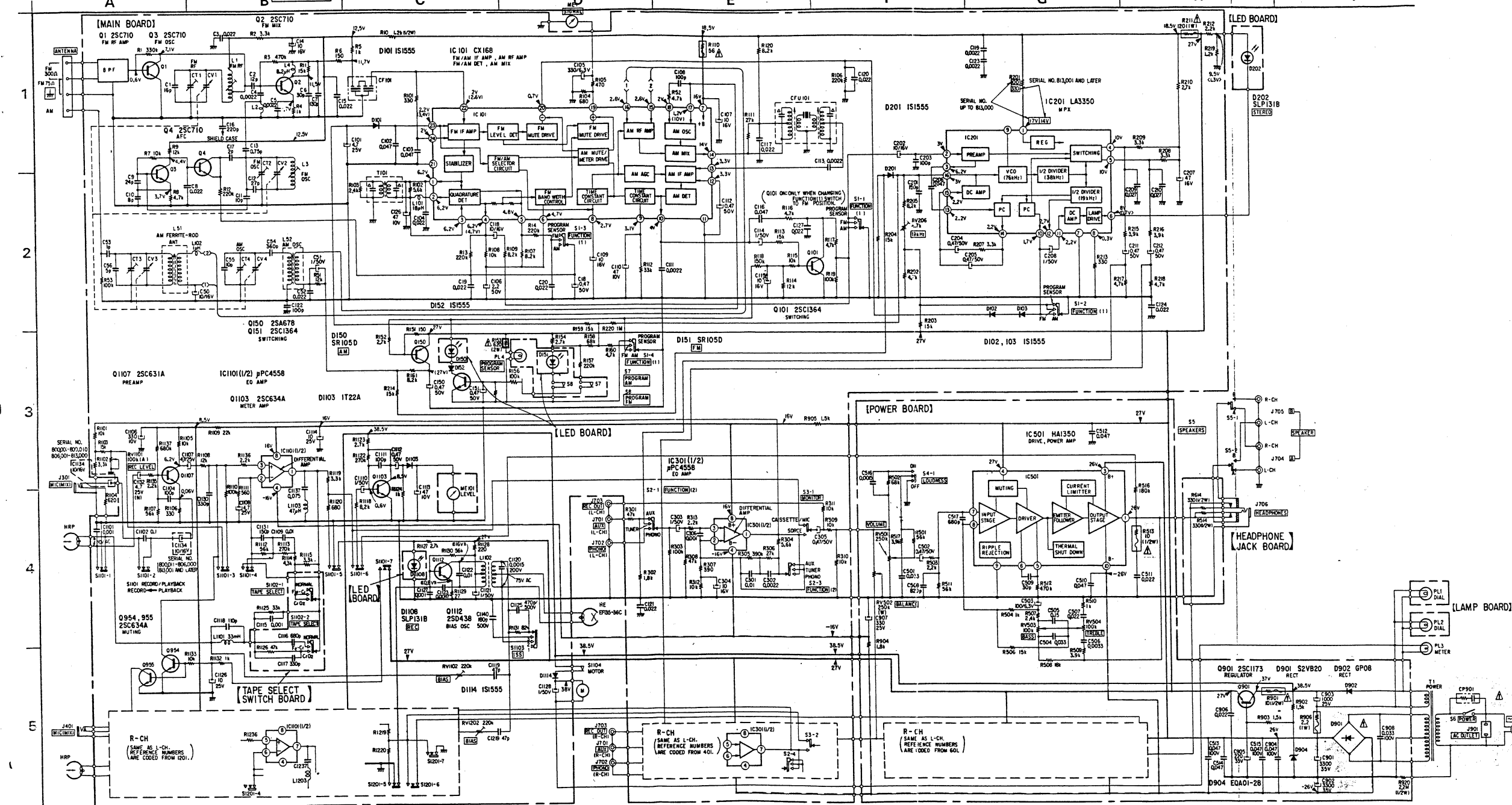
US model

HST-49 HST-49

US model

HST-49

US model



Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F}$ 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{2}$ W unless otherwise noted. $\text{k}\Omega = 1000 \Omega$; $\text{M}\Omega = 1000 \text{k}\Omega$.
- $\sim$: fusible resistor.
- (N): low-noise resistor.
- $\square$: panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 $\text{k}\Omega/\text{V}$).
- (V): AM
- < V >: LED light
- (V): record (with VTVM)
- B+: bus.
- B-: bus.
- $\square$: adjustment for repair
- Switch

Ref. No.	Switch	Position
S1	FUNCTION (1)	PROGRAM SENSOR
S2	FUNCTION (2)	AUX CASSETTE/MIC
S3	FUNCTION (3)	OFF
S4	LOUDNESS	OFF
S5	SPEAKER	A
S6	POWER	OFF
S7	AM	OFF
S8	FM	OFF
S1101, 1201	RECORD/PLAYBACK	PLAYBACK
S1102, 1202	TAPE SELECT	NORMAL
S1103	ISS	1
S1104	MOTOR	OFF

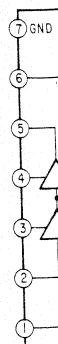
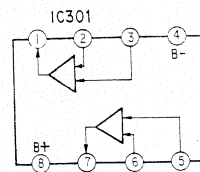
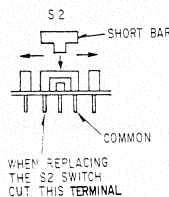
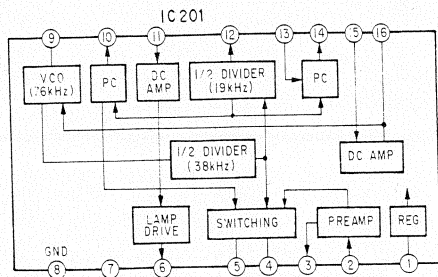
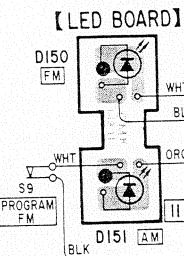
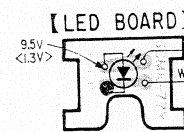
Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

— Conductor Side —

C

D

Q, IC	D
4	1114
2	1112
3	1206
1	1207
1208	101
1108	1205, 1206
IC101	101
1211	1110
1109	1111
1210	102
1209	103
1204	103
1106	1107
202	1106
201	1105
IC201, IC102	150
1104	104
1107	152
1207	152
151	953
954	150
1203	151
1203	1203
1103	1103
IC301	
Q, IC	D



NOTE OF SCHEMATIC DIAGRAM

Note:

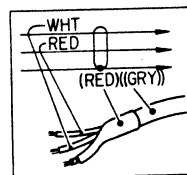
- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}$ W unless otherwise noted. $\text{k}\Omega = 1000 \Omega$; $\text{M}\Omega = 1000 \text{k}\Omega$
-  : fusible resistor.
- (N) : low-noise resistor.
-  : panel designation.
-  : adjustment for repair
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM ($20 \text{k}\Omega/\text{V}$).
- (V) : AM
< V > : LED light
((V)) : record (with VTVM)
-  : B+ bus.
-  : B- bus.
- Switch

Ref. No.	Switch	Position
S1	FUNCTION (1)	PROGRAM SENSOR
S2	FUNCTION (2)	AUX
S3	MONITOR	CASSETTE/MIC
S4	LOUDNESS	OFF
S5	SPEAKER	A
S6	POWER	OFF
S7	LW ANTENNA	BUILT IN
(AEP model)		
S8	PROGRAM AM	OFF
S9	PROGRAM FM	OFF
S10	Voltage Selector	220 - 240 V
(E model)		
S1101	RECORD/ PLAYBACK	RECORD
S1102, 1202	TAPE SELECT	NORMAL
S1103	ISS	1
S1104, 1204	DOLBY	OFF
S1105	MOTOR	OFF

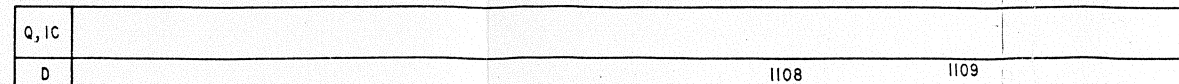
NOTE OF MOUNTING DIAGRAM

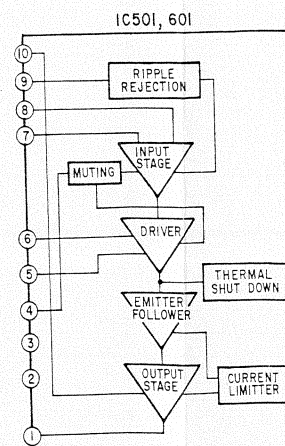
Note:

-  : part mounted on the conductor side.
-  : indicates side identified with part number.
- Color code of sleeving over the end of the jacket.



-  : B+ pattern
-  : B- pattern
- Signal Path
-  : L-CH
-  : R-CH





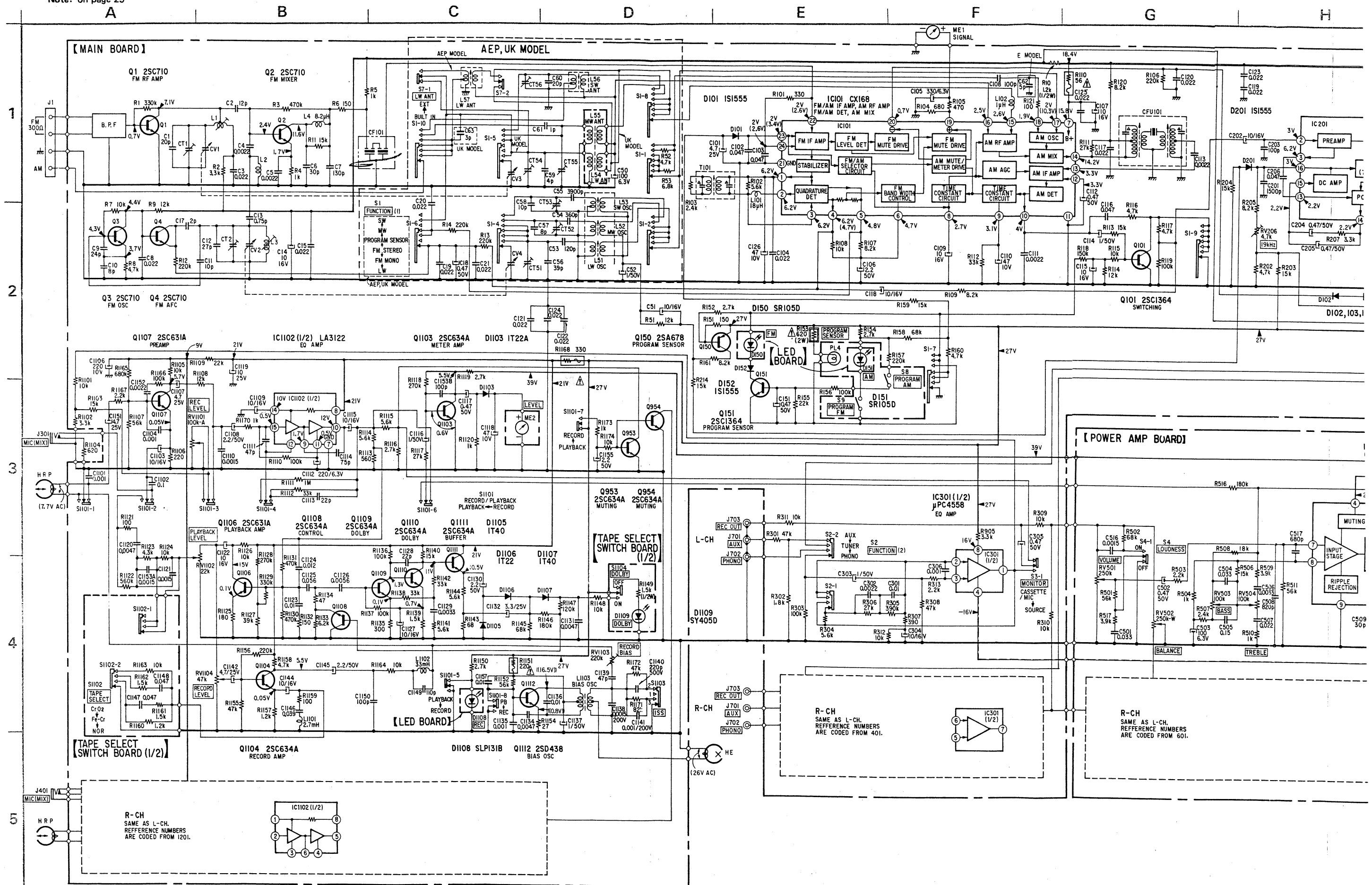
4.4. SCHEMATIC DIAGRAM

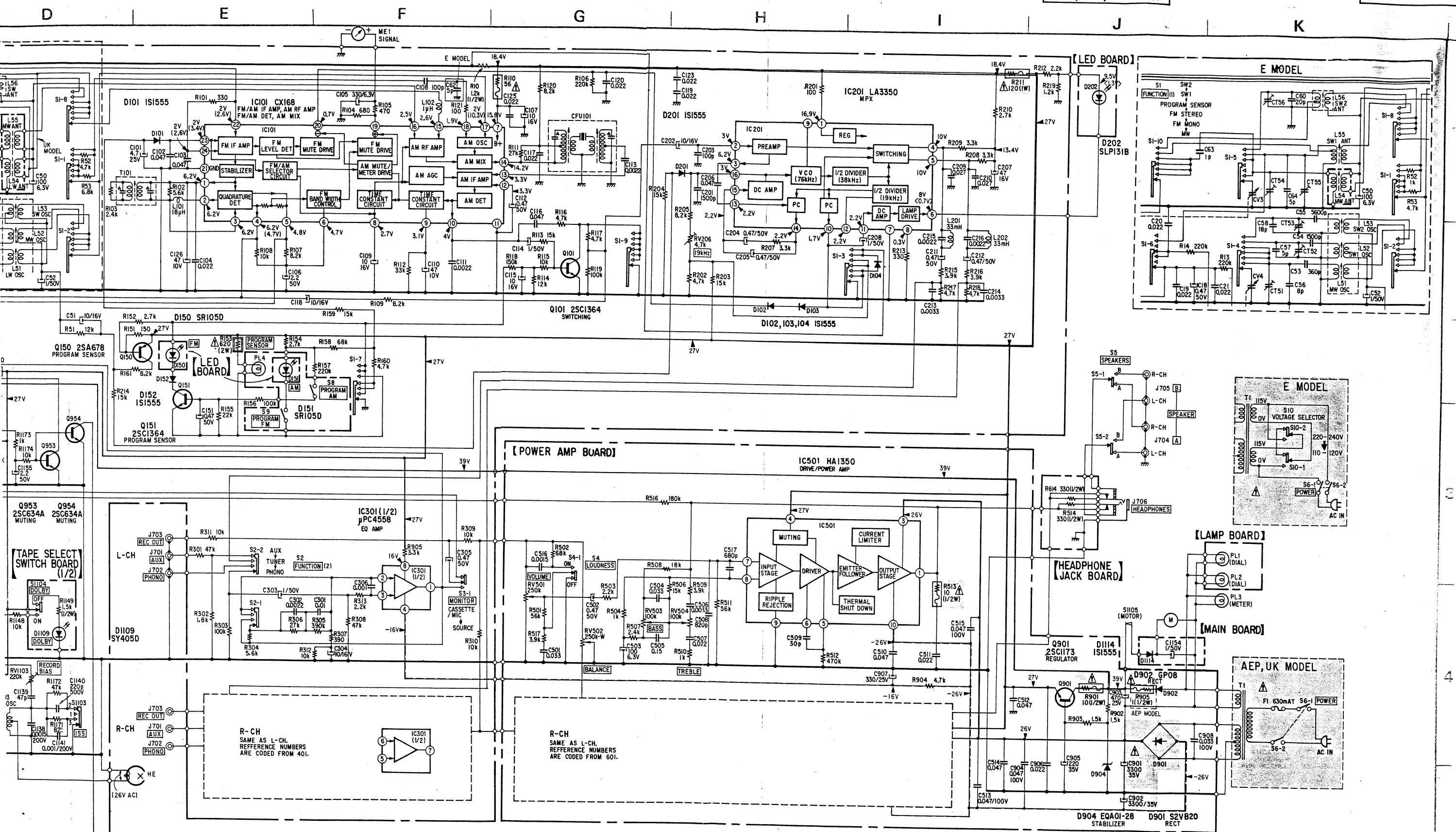
Note: on page 29

AEP, UK, E model

HST-49 HST-49

AEP, UK, E model





Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

SECTION 5

EXPLODED VIEWS

A

B

C

D

Note: • Items with no part number and/or no description are not stocked because they are seldom required for routine service.

- All screws are Phillips (cross recess) type unless otherwise noted.

(-) = slotted head

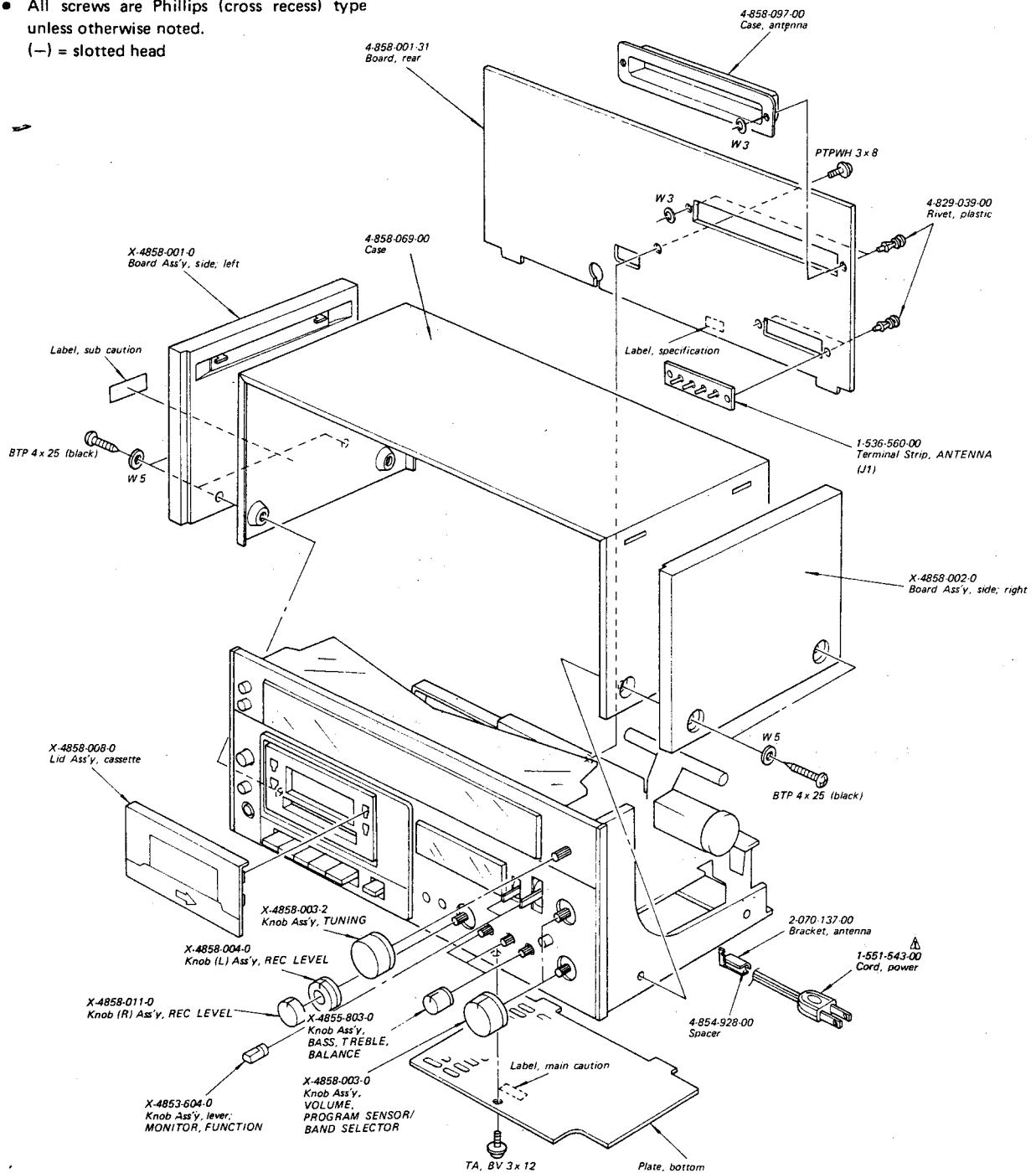
1 (1)

2

3

4

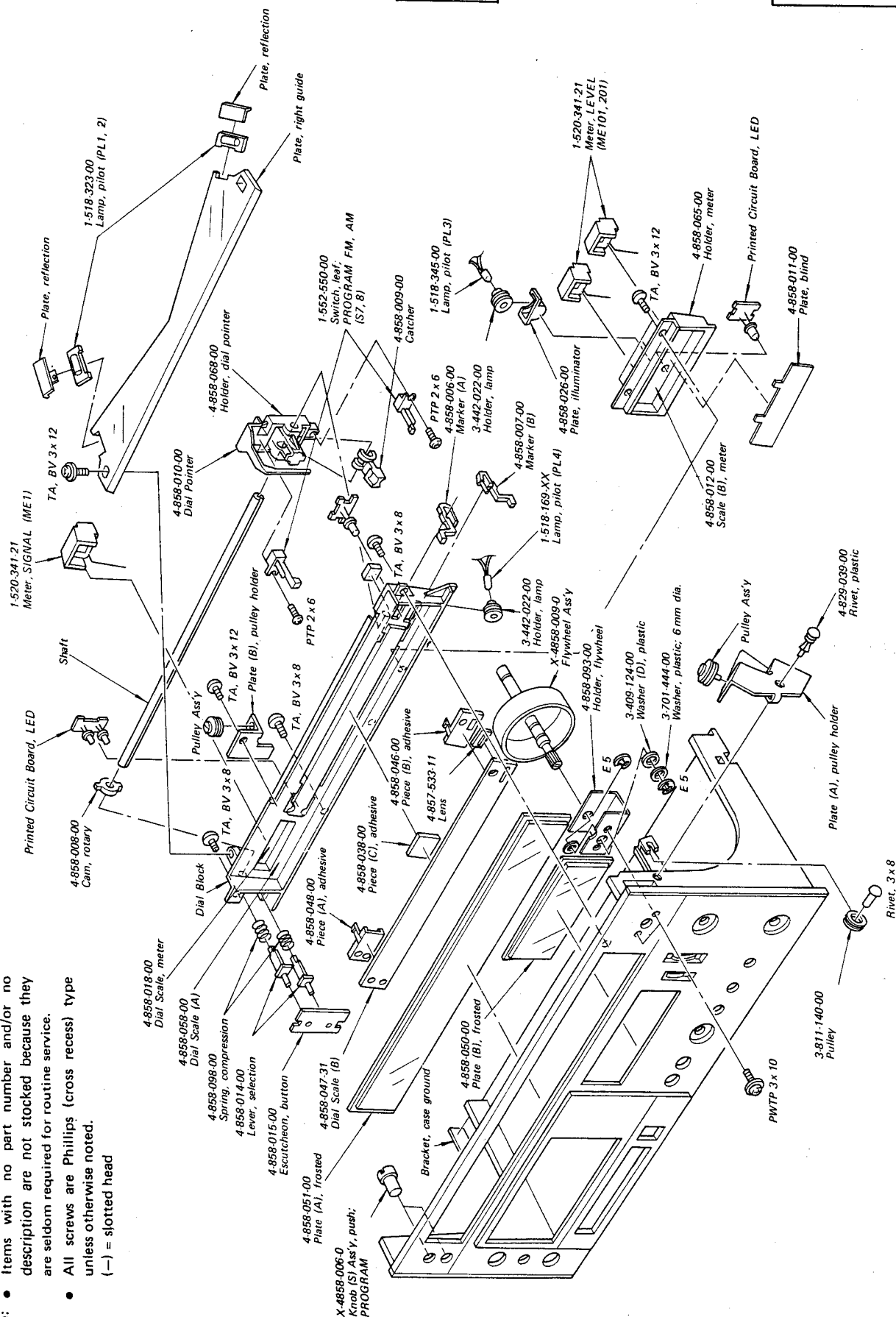
5

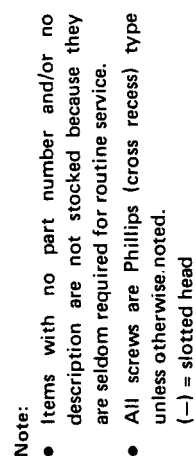


Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

A B C D E

- Note:**
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 - All screws are Phillips (cross recess) type unless otherwise noted.
 - (-) = slotted head



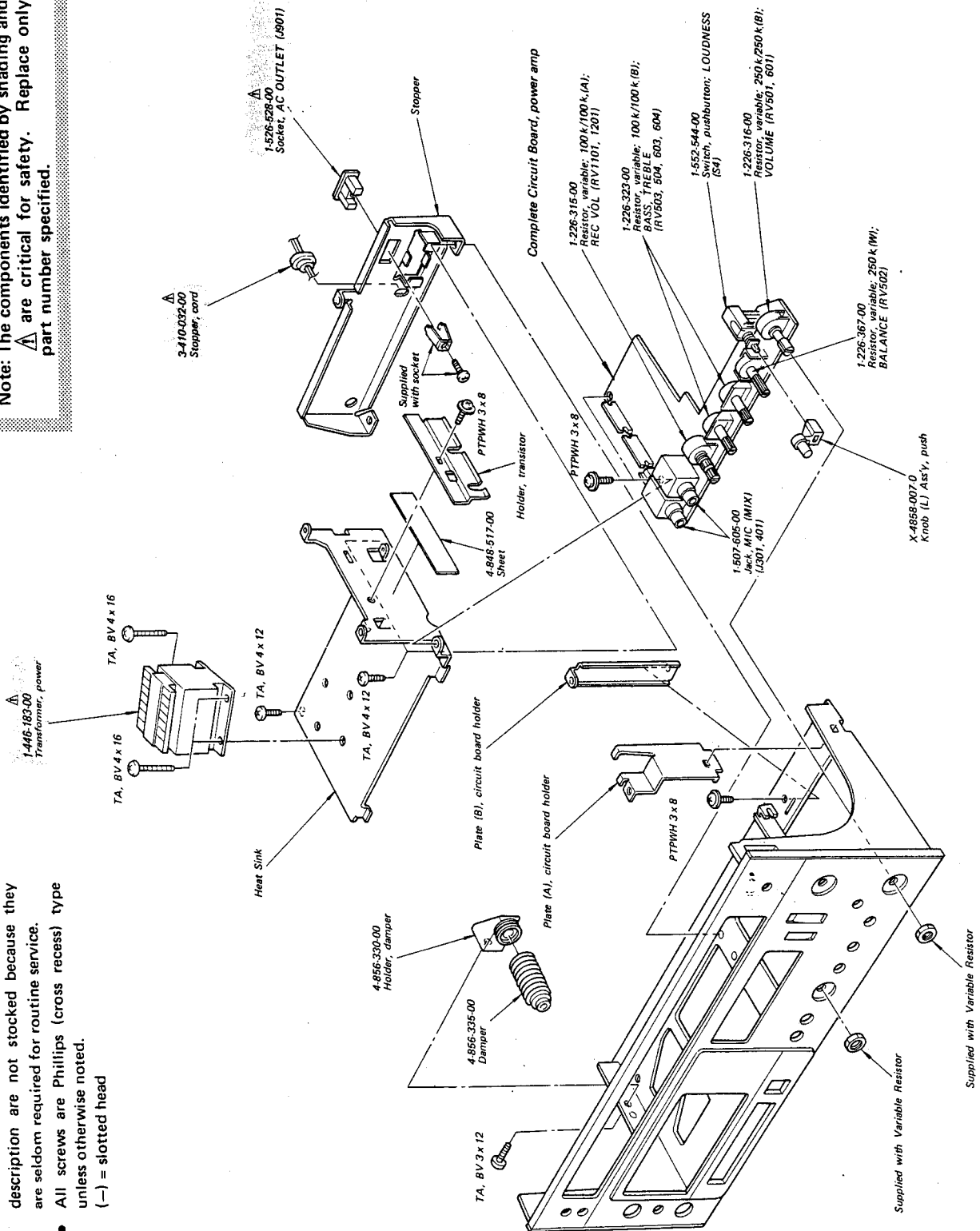


Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

- Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 - All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

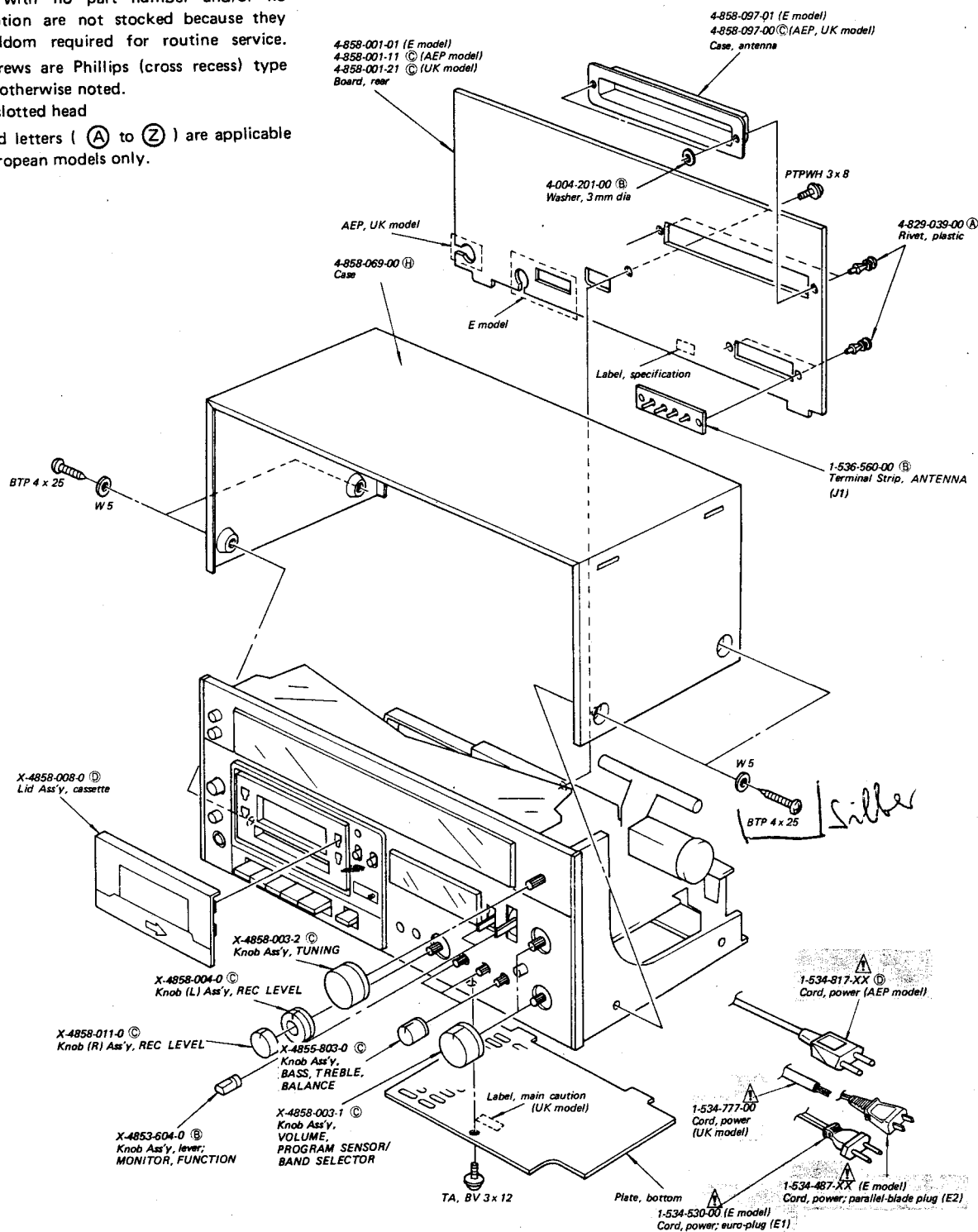
(4)



(5)

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(—) = slotted head
- Circled letters (A) to (Z) are applicable to European models only.



Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

2

3





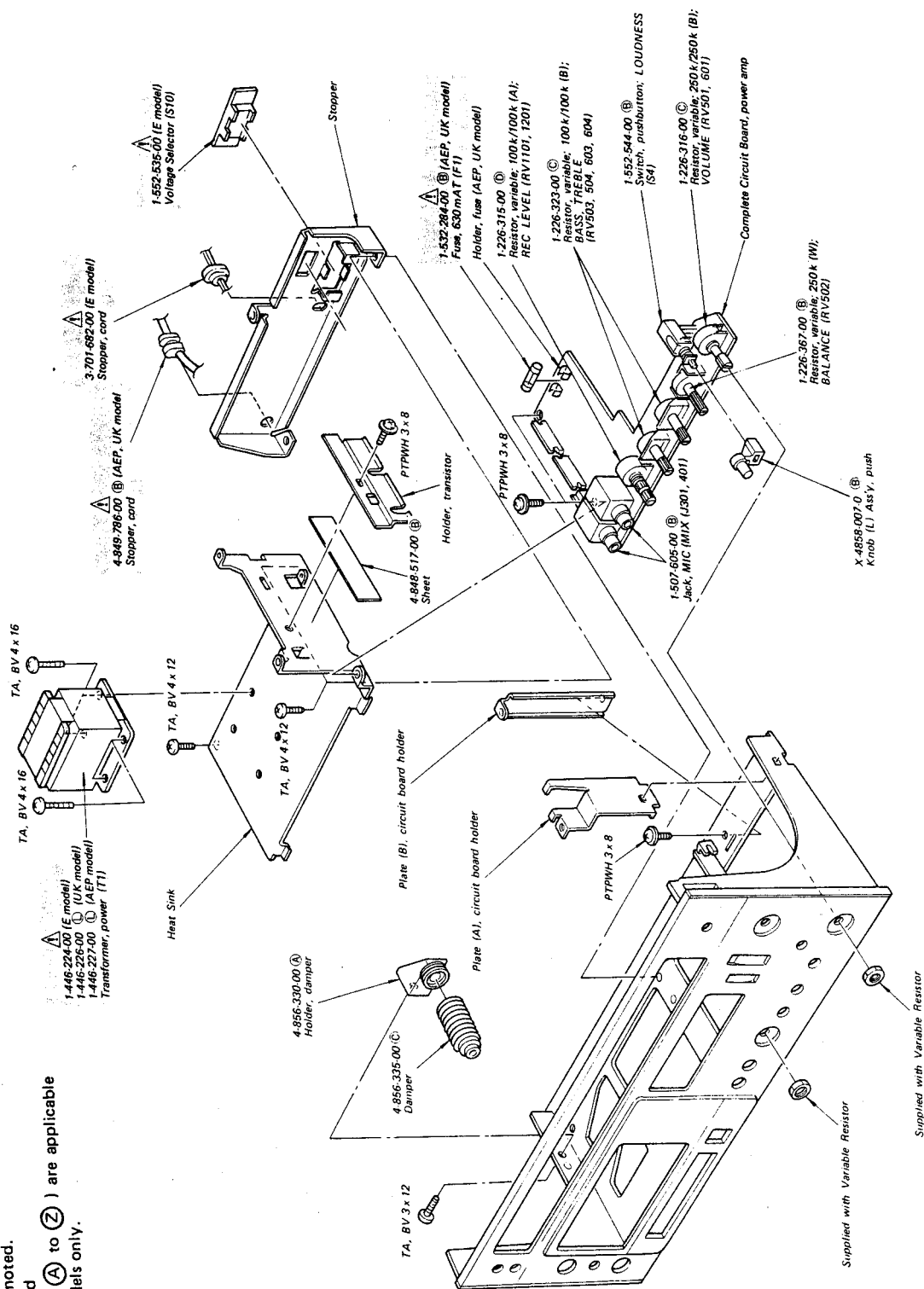
X-4858-016-1 (E model)
X-4858-016-2 (AEP, UK model)
Chassis Ass'y, panel; including
part marked ● A

(8)

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- Circled letters (A) to (Z) are applicable to European models only.

Note: The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.



A

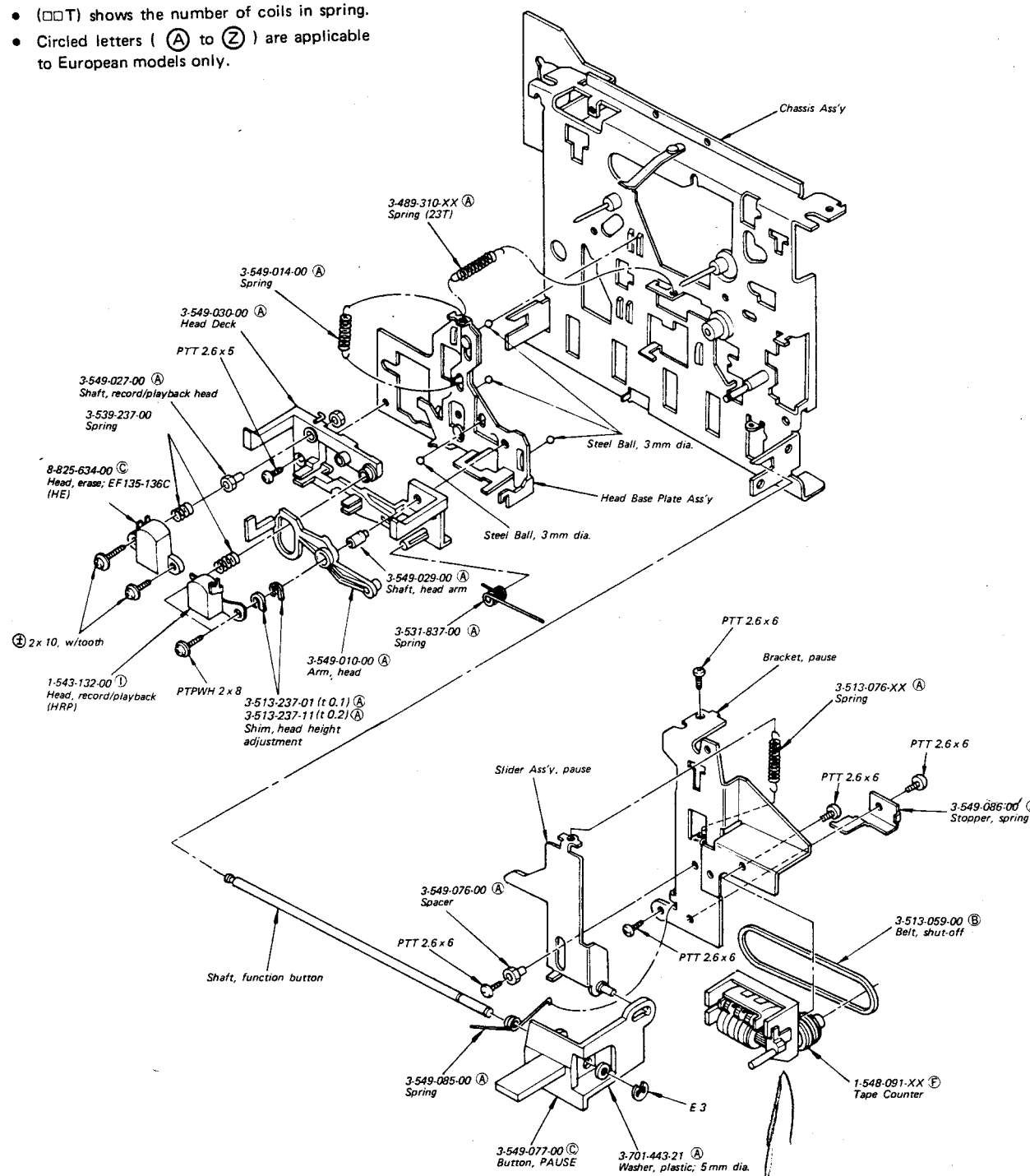
B

C

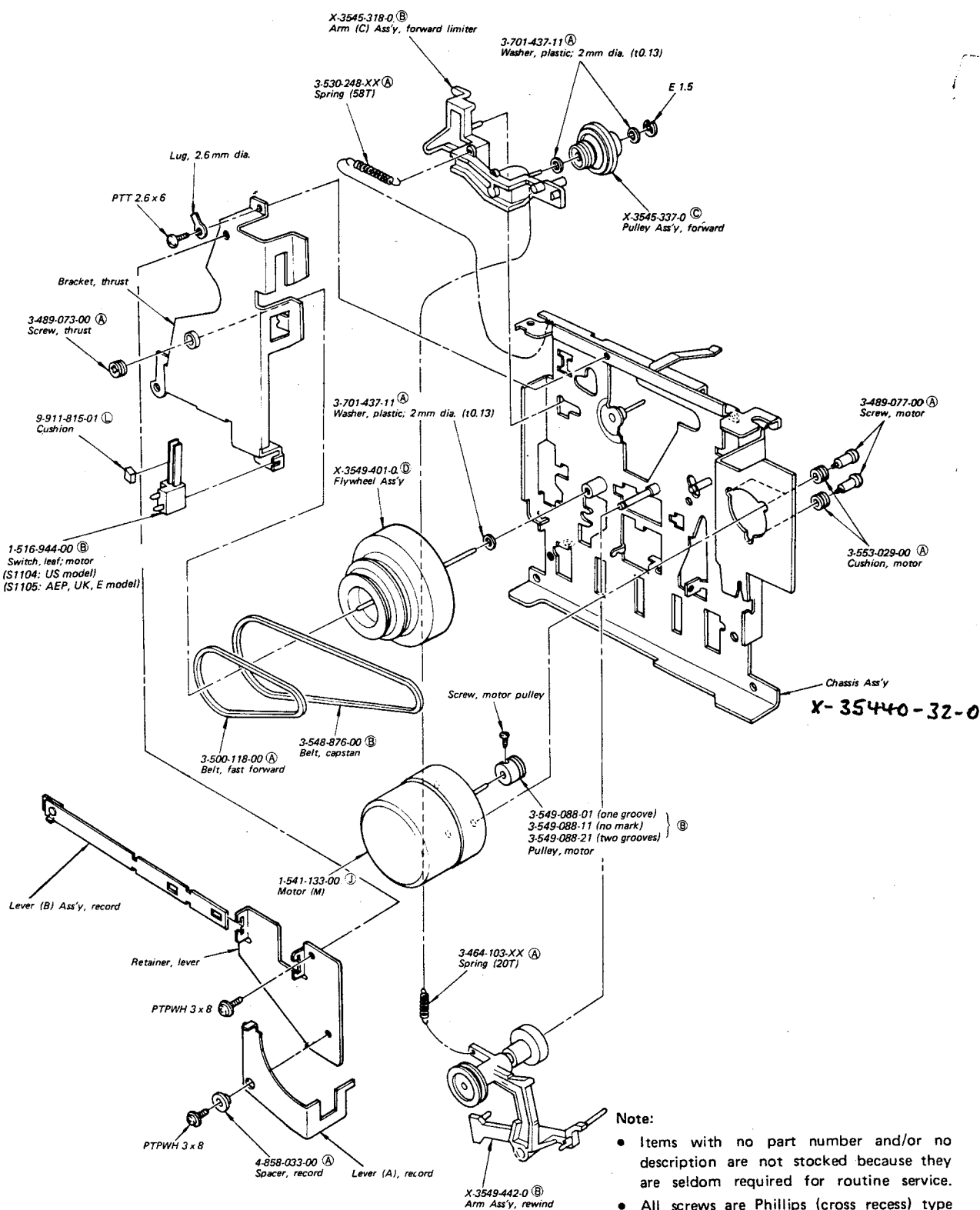
D

(9) Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (A) to (Z) are applicable to European models only.



(10)



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(—) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (A to Z) are applicable to European models only.

A

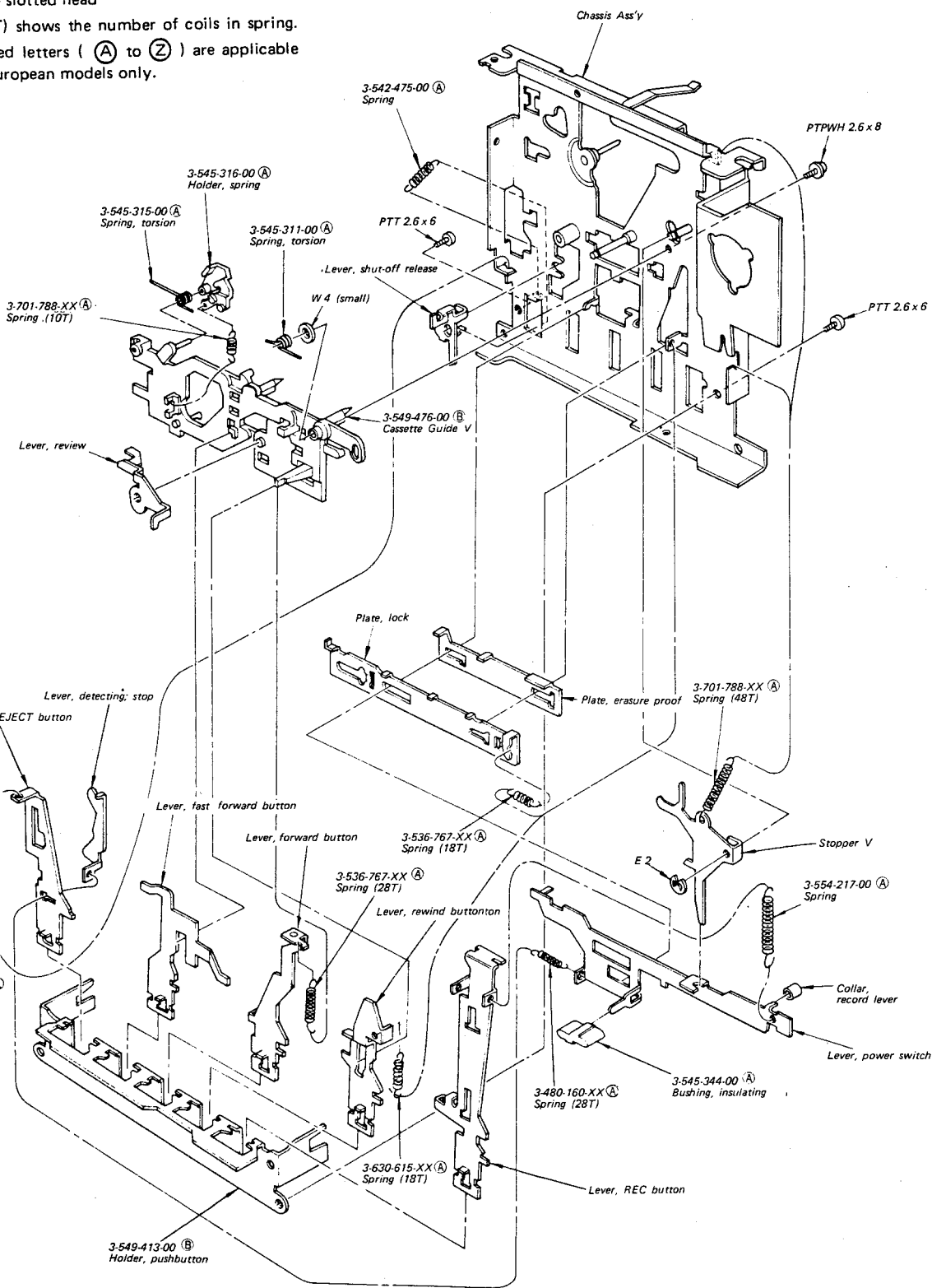
B

C

D

(11) Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (A) to (Z) are applicable to European models only.



A

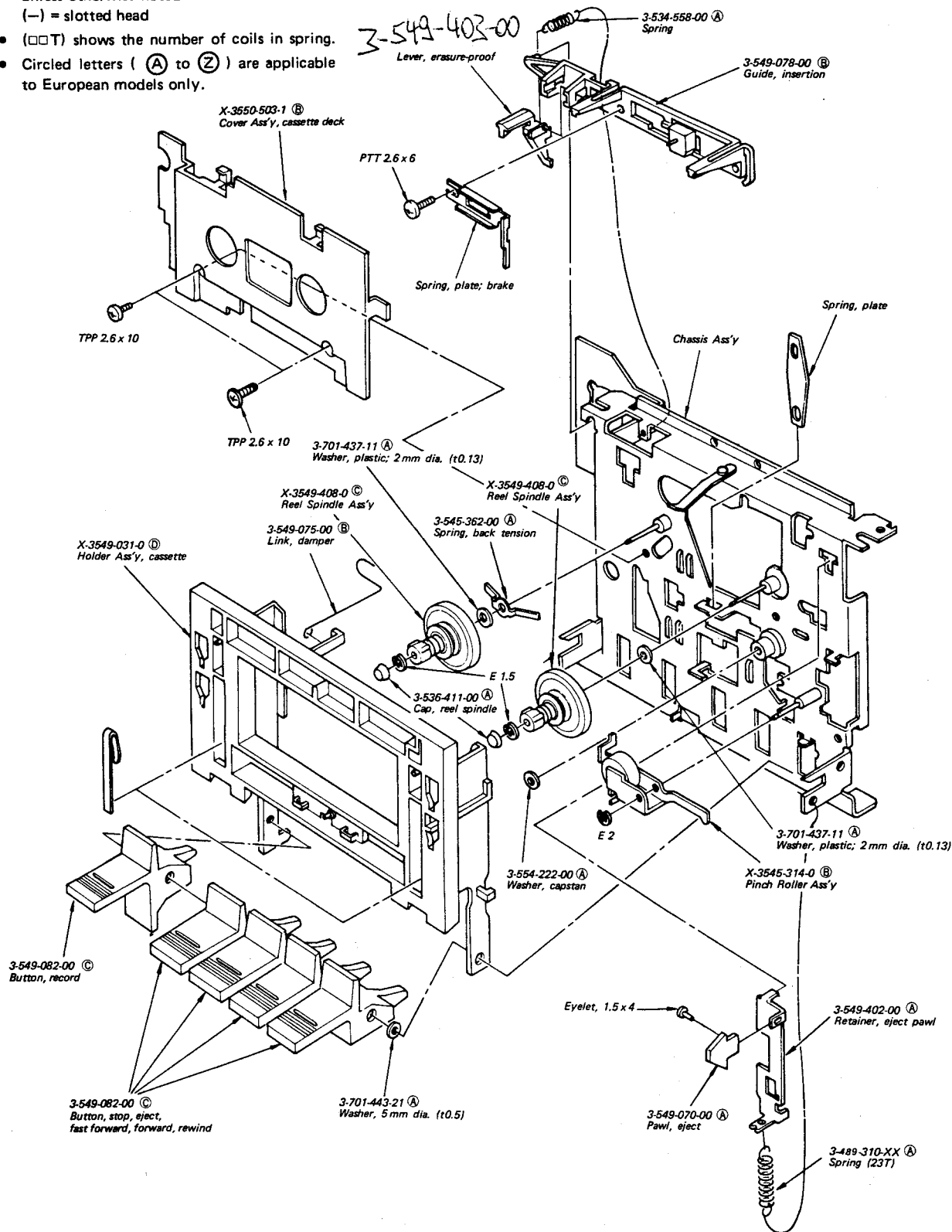
B

C

D

(12) Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (A) to (Z) are applicable to European models only.



SECTION 6

Note: Circled letters (A) to (Z) are applicable to European models only.

ELECTRICAL PARTS LIST

Ref. No. Part No. Description

SEMICONDUCTORS

Transistors

Q1-4	8-729-671-14	(B) 2SC710
Q101	8-729-663-47	(B) 2SC1364
Q150	8-729-788-00	(B) 2SA678
Q151	8-729-663-47	(B) 2SC1364
Q901	8-729-217-33	(C) 2SC1173
⇒ Q953	8-729-663-47	(B) 2SC1364 (AEP, UK, E model)
⇒ Q954	8-729-663-47	(B) 2SC1364
⇒ Q955	8-729-663-47	(B) 2SC1364 (US model)
⇒ Q1103, 1203	8-729-663-47	(B) 2SC1364
Q1104, 1204	8-729-663-47	(B) 2SC1364 (AEP, UK, E model)
Q1106, 1206	8-729-665-47	(B) 2SC1362 (AEP, UK, E model)
⇒ Q1107, 1207	8-729-665-47	(B) 2SC1362
Q1108, 1208	8-726-387-32	(B) 2SC634A (AEP, UK, E model)
Q1109, 1209	8-729-663-47	(B) 2SC1364 (AEP, UK, E model)
Q1111, 1211		
Q1112	8-729-843-82	(B) 2SD438

ICs

IC101	8-751-680-01	(I) CX168
IC201	8-759-833-50	(E) LA3350
⇒ IC301	8-759-145-58	(D) μ PC4558C
⇒ IC501, 601	8-759-313-50	(G) HA1350S
⇒ IC1101	8-759-145-58	μ PC4558C (US model)
IC1102	8-759-831-22	(D) LA3122 (AEP, UK, E model)

Diodes

D101-103	8-719-815-55	(B) 1S1555
D104	8-719-815-55	(B) 1S1555 (AEP, UK, E model)
⇒ D150, 151	8-719-812-41	(B) TLR124
D152	8-719-851-55	(B) 1S1555
D201	8-719-815-55	(B) 1S1555
D202	8-719-901-31	(B) SLP131B
D901	△ 8-719-502-20	(C) S2VB20
⇒ D902	8-719-200-02	(B) 10E2
⇒ D904	8-719-931-28	(B) EQB01-28

Ref. No. Part No. Description

⇒ D1103, 1203	8-719-422-21	(B) 1T22AM
⇒ D1105, 1205	8-719-815-55	(B) 1S1555 (AEP, UK, E model)
⇒ D1106, 1206	8-719-422-21	(B) 1T22AM (AEP, UK, E model)
⇒ D1107, 1207	8-719-815-55	(B) 1S1555 (AEP, UK, E model)
D1108	8-719-901-31	(B) SLP131B

D1109	8-719-101-45	(B) SY405D1 (AEP, UK, E model)
D1114	8-719-815-55	(B) 1S1555

COILS

L4	1-407-189-XX	(A) Microinductor, 8.2 μ H
L51	1-401-742-11	Ferrite-rod Antenna (US model)
	1-405-813-00	(B) LW osc (AEP, UK model)
	1-405-814-00	MW osc (E model)
L52	1-405-814-00	AM osc (US model)
	1-405-814-00	(B) MW osc (AEP, UK model)
	1-405-815-00	SW1 osc (E model)
L53	1-405-812-00	(B) SW osc (AEP, UK model)
	1-405-820-00	SW2 osc (E model)
L54	1-401-742-11	Ferrite-rod Antenna (E model)
L54, 55	1-401-750-00	(D) Ferrite-rod Antenna (AEP, UK model)
L55	1-401-745-00	SW1 ANT (E model)
L56	1-401-741-00	(B) SW ANT (AEP, UK model)
	1-401-746-00	SW2 ANT (E model)
L57	1-401-749-00	(B) LW ANT (AEP model)
L101	1-407-741-00	(B) Microinductor, 18 μ H
L102	1-407-178-XX	(A) Microinductor, 1 μ H
L201, 202	1-407-964-00	(B) Microinductor, 33 mH (AEP, UK, E model)
	1-407-964-00	Microinductor, 33 mH (US model)
	1-407-961-00	(B) Microinductor, 2.7 mH (AEP, UK, E model)
L1102	1-433-199-00	Transformer, bias osc (US model)
	1-407-964-00	(B) Microinductor, 33 mH (AEP, UK, E model)
	1-407-165-XX	Microinductor, 47 μ H (US model)
L1103	1-433-199-00	(B) Transformer, bias osc (AEP, UK, E model)

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No.	Part No.	Description
L1202	1-407-964-00 (B)	Microinductor, 33 mH (AEP, UK, E model)
L1203	1-407-165-XX	Microinductor, 47 μ H (US model)

TRANSFORMERS

CFU101	1-403-144-00	IFT Triple Tune (US model)
	1-403-827-00 (C)	IFT Triple Tune (AEP, UK, E model)

T1	 1-446-183-00	Power (US model)
	 1-446-224-00	Power (E model)
	 1-446-226-00 (L)	Power (UK model)
	 1-446-227-00 (L)	Power (AEP model)

T101	1-404-011-00 (C)	FM Discriminator
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CAPACITORS

All capacitors are in μ F and ceramic unless otherwise noted.
50 WV or less are not indicated except for electrolytics.
p : μ F, elect : electrolytic

C1	1-102-958-00 (A)	20 p
C2	1-102-949-00 (A)	12 p
C3	1-101-005-00 (A)	0.022
C4, 5	1-101-002-00 (A)	0.0022
C6	1-102-962-00 (A)	30 p
C7	1-101-081-00 (A)	130 p
C8	1-101-005-00 (A)	0.022
C9	1-101-982-00 (A)	24 p
C10	1-102-684-00 (A)	8 p
C11	1-101-978-00 (A)	10 p
C12	1-102-643-00 (A)	27 p
C13	1-101-586-00 (A)	0.75 p
C14	1-121-651-00 (A)	10 16 V elect
C15	1-101-005-00 (A)	0.022
C16	1-102-978-00 (A)	220 p (US model)
C17	1-102-935-00 (A)	2 p
C18	1-121-726-00 (A)	0.47 50 V elect
C19, 20	1-101-005-00 (A)	0.022
C21	1-101-005-00 (A)	0.022 (AEP, UK, E model)

Ref. No.	Part No.	Description
C50	1-121-651-00 10	16 V elect (US model)
	1-121-414-00 (A) 100	6.3 V elect (AEP, UK, E model)
C51	1-121-391-00 1	50 V elect (US model)
	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C52	1-101-005-00 0.022	(US model)
	1-121-391-00 (A) 1	50 V elect (AEP, UK, E model)
C53	1-102-934-00 1 p	(US model)
	1-103-703-00 (A) 120 p	polyethylene (AEP, UK model)
	1-103-714-00 360 p	polyethylene (E model)
C54	1-103-714-00 (A) 360 p	polyethylene (US, AEP, UK model)
	1-103-729-00 1,500 p	polyethylene (E model)
C55	1-102-285-00 10 p	(US model)
	1-104-091-00 (A) 3,900 p	(AEP, UK model)
	1-104-095-00 5,600 p	(E model)
C56	1-102-942-00 5 p	(US model)
	1-102-693-00 (A) 39 p	(AEP, UK model)
C57	1-102-283-00 8 p	(E model)
	1-102-283-00 (A) 8 p	(AEP, UK model)
C58	1-102-281-00 5 p	(E model)
	1-102-253-00 (A) 10 p	(AEP, UK model)
C59	1-102-295-00 18 p	(E model)
	1-102-937-00 (A) 4 p	(AEP, UK model)
C60	1-102-958-00 (A) 20 p	(AEP, UK model)
	1-102-961-00 27 p	(E model)
C61	1-102-934-00 (A) 1 p	(AEP, UK model)
C62	1-102-807-00 5 p	(E model)
C63	1-102-934-00 1 p	(E model)
	1-102-936-00 (A) 3 p	(UK model)
C64	1-102-807-00 5 p	(E model)
C101	1-121-395-00 (A) 4.7	25 V elect
C102, 103	1-101-925-00 (A) 0.047	
C104	1-101-005-00 (A) 0.022	
C105	1-121-751-00 (A) 330	6.3 V elect
C106	1-121-450-00 (A) 2.2	50 V elect

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No.	Part No.	Description
C107	1-121-651-00 (A) 10	16 V elect
C108	1-107-085-00 (A) 100 p	mica
C109	1-121-651-00 (A) 10	16 V elect
C110	1-121-352-00 (A) 47	10 V elect
C111	1-161-043-00 (A) 0.0022	
C112	1-121-726-00 (A) 0.47	50 V elect
C113	1-101-002-00 (A) 0.0022	
C114	1-121-391-00 (A) 1	50 V elect
C115	1-121-651-00 (A) 10	16 V elect
C116	1-101-925-00 (A) 0.047	
C117	1-101-005-00 (A) 0.022	
C118	1-121-651-00 (A) 10	16 V elect
C119-121	1-101-005-00	0.022 (US model)
C122	1-102-973-00	100 p (US model)
C123, 124	1-101-005-00	0.022 (US model)
C119-125	1-101-005-00 (A) 0.022	(AEP, UK, E model)
C126	1-121-352-00 (A) 47	10 V elect
C127	1-101-005-00 (A) 0.022	
C150	1-121-726-00	0.47 50 V elect (US model)
C151	1-121-726-00 (A) 0.47	50 V elect
C201	1-104-081-00 (A) 150 p	polyethylene
C202	1-121-651-00 (A) 10	16 V elect
C203	1-102-973-00 (A) 100 p	
C204, 205	1-121-726-00 (A) 0.47	50 V elect
C206	1-101-925-00 (A) 0.047	
C207	1-121-409-00 (A) 47	16 V elect
C208	1-121-391-00 (A) 1	50 V elect
C209, 210	1-161-018-00 (A) 0.027	
C211, 212	1-121-726-00 (A) 0.47	50 V elect
C213, 214	1-161-045-00 (A) 0.0033	(semiconductor) (AEP, UK, E model)
C215, 216	1-161-043-00 (A) 0.0022	(semiconductor) (AEP, UK, E model)
C301, 401	1-108-239-00 (A) 0.01	mylar
C302, 402	1-108-230-00 (A) 0.0022	mylar
C303, 403	1-121-391-00 (A) 1	50 V elect
C304, 404	1-121-651-00 (A) 10	16 V elect
C305, 405	1-121-726-00 (A) 0.47	50 V elect

Ref. No.	Part No.	Description
C306, 406	1-102-074-00 (A) 0.001	
C307, 407	1-161-039-00 (A) 0.001	(semiconductor) (AEP, UK, E model)
C501, 601	1-108-591-00 (A) 0.033	mylar
C502, 602	1-121-726-00 (A) 0.47	50 V elect
C503, 603	1-121-413-00 (A) 100	6.3 V elect
C504, 604	1-108-591-00 (A) 0.033	mylar
C505, 605	1-108-252-00 (B) 0.15	mylar
C506, 606	1-108-567-00 (A) 0.0033	mylar
C507, 607	1-108-242-00 (A) 0.022	mylar
C508, 608	1-102-117-00 (A) 820 p	
C509	1-102-962-00 (A) 30 p	
C510, 610	1-101-006-00 (A) 0.047	
C511, 611	1-101-005-00 (A) 0.022	
C512	1-101-006-00 (A) 0.047	
C513	1-108-385-00 (A) 0.047	100 V mylar
C514	1-101-006-00 (A) 0.047	
C515	1-108-385-00 (A) 0.047	100 V mylar
C516, 616	1-108-228-12 (A) 0.0015	mylar
C517, 617	1-102-116-00 (A) 680 p	
C901, 902	(A) 1-123-118-00 (E) 3300	35 V elect
C903	1-121-733-00 (B) 1000	25 V elect
C904	1-108-385-00 (A) 0.047	100 V mylar
C905	1-121-261-00 (B) 220	35 V elect
C906	1-101-005-00 (A) 0.022	
C907	1-121-254-00 (B) 330	25 V elect
C908	1-108-383-00 (A) 0.033	100 V mylar
C1101, 1201	1-108-227-00 (A) 0.001	mylar
C1102, 1202	1-101-797-00 (A) 0.1	
C1103, 1203	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C1104, 1204	{ 1-102-973-00 100 p (US model) 1-102-074-00 (A) 0.001 (AEP, UK, E model)	
C1106	{ 1-121-805-00 330 10 V elect (US model) 1-121-420-00 (A) 220 10 V elect (AEP, UK, E model)	
C1107, 1207	1-121-395-00 (A) 4.7	25 V elect

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: Circled letters (A to Z) are applicable to European models only.

Ref. No.	Part No.	Description
C1108,1208	1-121-395-00 4.7	25 V elect (US model)
	1-121-450-00 (A) 2.2	50 V elect (AEP, UK, E model)
C1109,1209	1-108-239-00 0.01	mylar (US model)
	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C1110,1210	1-121-391-00 1	50 V elect (US model)
	1-108-228-00 (A) 0.0015	mylar (AEP, UK, E model)
C1111,1211	1-102-973-00 100 p	(US model)
	1-101-881-00 (A) 47 p	(AEP, UK, E model)
C1112,1212	1-121-726-00 0.47	50 V elect (US model)
	1-121-419-00 (B) 220	6.3 V elect (AEP, UK, E model)
C1113,1213	1-121-352-00 47	10 V elect (US model)
	1-102-959-00 (A) 22 p	(AEP, UK, E model)
C1114	1-121-398-00 10	25 V elect (US model)
C1114, 1214	1-101-890-00 (A) 75 p	(AEP, UK, E model)
C1115,1215	1-108-227-00 0.001	mylar (US model)
	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C1116,1216	1-102-116-00 680 p	(US model)
	1-121-391-00 (A) 1	50 V elect (AEP, UK, E model)
C1117,1217	1-102-112-00 330 p	(US model)
	1-121-726-00 (A) 0.47	50 V elect (AEP, UK, E model)
C1118,1218	1-102-815-00 110 p	(US model)
	1-121-352-00 (A) 47	10 V elect (AEP, UK, E model)
C1119,1219	1-101-880-00 47 p	(US model)
	1-121-398-00 (A) 10	25 V elect (AEP, UK, E model)
C1120	1-108-411-00 0.0015	200 V mylar (US model)
C1120, 1220	1-108-234-00 (A) 0.0047	mylar (AEP, UK, E model)

Ref. No.	Part No.	Description
C1121	1-121-391-00 1	50 V elect (US model)
C1121, 1221	1-108-228-00 (A) 0.0015	mylar (AEP, UK, E model)
C1122	1-102-129-00 0.01	(US model)
C1122, 1222	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
	1-102-125-00 0.0047	(US model)
C1123	1-102-125-00 0.0047	(US model)
C1123, 1223	1-108-239-00 (A) 0.01	mylar (AEP, UK, E model)
C1124, 1224	1-108-581-00 (A) 0.012	mylar (AEP, UK, E model)
	1-107-185-00 470 p	500 V silvered mica (US model)
C1125	1-107-185-00 470 p	500 V silvered mica (US model)
C1125, 1225	1-108-361-00 (A) 0.056	mylar (AEP, UK, E model)
C1126	1-121-398-00 10	25 V elect (US model)
C1126, 1226	1-108-355-00 (A) 0.0056	mylar (AEP, UK, E model)
C1127	1-102-074-00 0.001	(US model)
C1127, 1227	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C1128	1-121-391-00 1	50 V elect (US model)
C1128, 1228	1-102-959-00 (A) 22 p	(AEP, UK, E model)
C1129, 1229	1-108-567-00 (A) 0.0033	mylar (AEP, UK, E model)
C1130,1230	1-102-112-00 330 p	(US model)
	1-121-450-00 (A) 2.2	50 V elect (AEP, UK, E model)
C1131,1231	1-101-361-00 150 p	(US model)
	1-108-234-00 (A) 0.0047	mylar (AEP, UK, E model)
C1132,1232	1-121-915-00 4.7	25 V elect (US model)
	1-121-392-00 (A) 3.3	25 V elect (AEP, UK, E model)
C1134, 1234	1-121-651-00 10	16 V elect (US model)
C1134	1-102-125-00 (A) 0.0047	(AEP, UK, E model)
C1135	1-102-074-00 (A) 0.001	(AEP, UK, E model)
C1136	1-102-129-00 (A) 0.01	(AEP, UK, E model)

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No.	Part No.	Description
C1137, 12371-108-600-00	0.075	mylar (US model)
C1137	1-121-391-00 (A) 1	50 V elect (AEP, UK, E model)
C1138	1-108-411-00 (B) 0.0015	200 V mylar (AEP, UK, E model)
C1139, 1239	1-101-881-00 (A) 47 p	(AEP, UK, E model)
C1140	1-107-175-00	180 p 500 V silvered-mica (US model)
	1-107-005-00 (A) 220 p	500 V silvered-mica (AEP, UK, E model)
C1141	1-108-409-00 (B) 0.001	200 V mylar (AEP, UK, E model)
C1142, 1242	1-121-395-00 (A) 4.7	25 V elect (AEP, UK, E model)
C1144, 1244	1-121-651-00 (A) 10	16 V elect (AEP, UK, E model)
C1145, 1245	1-121-450-00 (A) 2.2	50 V elect (AEP, UK, E model)
C1146, 1246	1-108-360-00 (A) 0.039	mylar (AEP, UK, E model)
C1147, 1247 C1148, 1248	1-108-595-00 (A) 0.047	mylar (AEP, UK, E model)
C1149, 1249	1-102-815-00 (A) 110 p	(AEP, UK, E model)
C1150, 1250	1-102-106-00 (A) 100 p	(AEP, UK, E model)
C1151, 1251	1-121-410-00 (B) 4.7	25 V elect (AEP, UK, E model)
C1152, 1252	1-108-230-00 (A) 0.0022	mylar (AEP, UK, E model)
C1153A, C1253A	1-108-228-00 (A) 0.0015	mylar (AEP, UK, E model)
C1154	1-121-391-00 (A) 1	50 V elect (AEP, UK, E model)
C1155	1-121-450-00 (A) 2.2	50 V elect (AEP, UK, E model)
C1156, 1256	1-108-228-00 (A) 0.0015	mylar (AEP, UK, E model)
C1157, 1257	1-108-239-00 (A) 0.01	mylar (AEP, UK, E model)
CV1-4 CT1-4	1-151-343-00	Variable Capacitor (US model)
CV1-4 CT1,2	1-151-345-00 (G)	Variable Capacitor (AEP, UK, E model)

Ref. No.	Part No.	Description
CT51-56	1-141-138-XX (A)	Trimmer (AEP, UK, E model)

RESISTORS

All resistors are in ohms. Common ¼ W carbon resistors are omitted. Refer to the list on the last page for their part numbers.

R10	1-202-575-00 (A) 1.2 k	½ W composition
R110	1-212-875-00 (A) 56	¼ W fusible (nonflammable)
R153	1-206-659-00 (A) 620	2 W metal oxide (nonflammable)
R211	1-213-086-00 (A) 120	1 W fusible (nonflammable)
R513, 613	1-212-958-00 (A) 10	½ W fusible (nonflammable)
R514, 614	1-244-861-00 (A) 330	½ W carbon
R901	1-212-958-00 (A) 10	½ W fusible (nonflammable)
R905	1-212-934-00 (A) 1	½ W fusible (AEP model) (nonflammable)
R906	1-213-044-00 (A) 2.2	1 W fusible (US model) (nonflammable)
R920	1-202-723-00 (A) 2.2 M	½ W composition
R1149	1-244-877-00 (A) 1.5 k	½ W carbon (AEP, UK, E model)
R1151	1-212-889-00 (A) 220	¼ W fusible (AEP, UK, E model) (nonflammable)
R1168	1-212-893-00 (A) 330	¼ W fusible (AEP, UK, E model) (nonflammable)
RV206	1-226-235-00 (A) 4.7 k, adjustable; 19 kHz	
RV501, 601	1-226-316-00 (C) 250 k/250 k (B), variable; VOLUME	
RV502	1-226-367-00 (B) 250 k (W), variable; BALANCE	
RV503, 603 RV504, 604	1-226-323-00 (C) 100 k/100 k (B), variable; BASS, TREBLE	
RV1101 RV1201	1-226-315-00 (D) 100 k/100 k (A), variable; REC LEVEL	9,60
RV1102 RV1202	1-224-649-XX 220 k (B), adjustable; bias (US model) 1-226-237-00 (A) 22 k (B), adjustable; playback level (AEP, UK, E model)	
RV1103 RV1203	1-226-240-11 (A) 220 k (B), adjustable; record bias (AEP, UK, E model)	
RV1104 RV1204	1-226-238-00 (A) 47 k (B), adjustable; record level (AEP, UK, E model)	

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: Circled letters (A) to (Z) are applicable to European models only.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
SWITCHES		
S1	1-552-549-00	Rotary-slide, FUNCTION (1) (US model)
	1-552-597-00 (E)	Rotary-slide, FUNCTION (1) (AEP, UK, E model)
S2	1-552-551-00 (C)	Slide, FUNCTION (2)
S3	1-552-548-00 (C)	Slide, MONITOR
S4	1-552-544-00 (B)	Pushbutton, LOUDNESS
S5	1-552-545-00 (B)	Push, SPEAKER
S6	1-552-530-00 (A)	Push, POWER (US model)
	1-552-531-00 (C)	Push, POWER (AEP, UK, E model)
S7, 8	1-552-550-00	Leaf, PROGRAM AM, FM (US model)
S7	1-516-927-00 (B)	Pushbutton, LW ANTENNA (AEP model)
S8, 9	1-552-550-00 (B)	Leaf, PROGRAM AM, FM (AEP, UK, E model)
S10	1-552-535-00 (A)	Voltage Selector (E model)
S1101, 1201	1-552-547-00 (C)	Slide, record/playback
S1102, 1202	1-552-546-00 (C)	Slide, TAPE SELECT
S1103	1-516-870-00 (B)	Slide, ISS
S1104	1-516-944-00	Leaf, motor (US model)
S1104, 1204	1-552-594-00 (C)	Side, DOLBY (AEP, UK, E model)
S1105	1-516-944-00 (B)	Leaf, motor (AEP, UK, E model)
JACKS		
J1	1-536-560-00 (B)	Terminal Strip, ANTENNA
J301, 401	1-507-605-00 (B)	Jack, MIC (MIX)
J701-705	1-507-500-00 (B)	Pin Jack, 2 p; REC OUT, AUX PHONO, SPEAKER A, B
J706	1-507-606-00 (C)	Jack, HEADPHONES
J901	1-526-528-00 (A)	Socket, AC outlet (US model)
MISCELLANEOUS		
BPF	1-231-313-00 (B)	Bandpass Filter
CF101	1-527-248-XX (I)	10.7 MHz Ceramic Filter
CP901	1-231-326-00 (A)	Encapsulated Component (US model)
E1	1-551-530-00 (A)	Cord, power; euro-plug (E model)
E2	1-534-487-XX (A)	Cord, power; parallel-blade plug (E model)
F1	1-532-284-00 (B)	Fuse, 630 mA (AEP, UK model)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
M	1-541-133-00 (J)	Motor
ME1	1-520-341-21	Meter, SIGNAL, LEVEL (US model)
ME101, 201	1-520-341-21 (F)	Meter, SIGNAL, LEVEL (AEP, UK, E model)
ME1-3	1-520-341-21 (F)	Meter, SIGNAL, LEVEL (AEP, UK, E model)
PL1, 2	1-518-323-00 (B)	Lamp, pilot 13 V 200 mA; dial
PL3	1-518-345-00 (B)	Lamp, pilot 13 V 77 mA; meter
PL4	1-518-169-XX (B)	Lamp, pilot; program sensor
HRP	1-543-132-00 (I)	Head, record/playback
HE	8-825-634-00 (C)	Head, erase; EF135-136C
	1-534-777-00 (A)	Cord, power (UK model)
	1-534-817-XX (D)	Cord, power (AEP model)
	1-551-543-00 (A)	Cord, power (US model)

ACCESSORIES & PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>
X-3701-105-1	Tips Ass'y, cleaning head (E model)
1-501-161-00 (F)	Antenna, feeder (AEP, UK, E model)
1-534-492-00 (C)	Wire, AM antenna (AEP, UK, E model)
2-070-137-00	Bracket, antenna (US model)
3-701-630-00 (A)	Bag, polyethylene
3-770-572-11 (D)	Manual, instruction (AEP, UK model)
3-770-572-51	Manual, instruction (E model)
3-770-572-21	Manual, instruction (US model)
3-794-233-21	Separate Sheet, consumer products (US model)
4-854-928-00	Spacer (US model)
4-858-078-00 (B)	Bag, polyethylene; protection
4-858-084-00 (B)	Cushion, upper
4-858-085-00 (B)	Cushion, lower; left
4-858-086-00 (B)	Cushion, lower; right
4-858-089-00	Carton (US model)
4-858-090-00 (E)	Carton (AEP, UK, E model)
4-859-912-00 (A)	Bag, polyethylene

Note: The components identified by shading and mark (A) are critical for safety. Replace only with part number specified.

1/4 WATT CARBON RESISTORS [Ⓐ]Note: Circled letter [Ⓐ] is applicable to European models only.

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

P 3 x 10

L: Length in mm

D: Diameter in mm

Type of head

Indicated slotted-head only.

Unless otherwise indicated, it means cross-recessed head (Phillips type).



Nut, Washer, Retaining ring:

N 3

Diameter of usable screw or shaft

Reference designation

Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

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